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ABSTRACT

Despite considerable progress by Middle Eastern and North African countries in improving opportunities for women to access and attain education at all levels, much remains to be done. This report focuses on three sets of highly inter-related determinants of access, achievement, and outcome--macro-level societal determinants, school characteristics, and family background characteristics--in seven representative Middle Eastern and North African countries: Egypt, Tunisia, Morocco, Jordan, Turkey, Saudi Arabia, and Kuwait. The research shows that the level of economic development of a country and the distribution of income have a much stronger impact than do Islamic and cultural values, while the size and growth rate of the population can place a major strain on school facility and resources. Sex-role stereotypes and the division of labor in the home and marketplace mean that expected returns from female education do not appear to justify the costs. Free, compulsory education and open admissions have led to major improvements in female education but have no guaranteed equity. Socio-economic background, parental education, family size, and family socialization exert a strong influence on educational attainment. Other key factors are a family's ability to cover the costs of education and forego the labor of the daughters. The availability and accessibility of schools and the quality of their programs and human resources have significant effects on female educational enrollment, continuation, quality, and outcome. All-girls schools have played a positive role under certain conditions. Because of the importance of female teachers and administrators as potential role models, their high rate of attrition and absenteeism calls for careful solutions. Contains 104 references. (Author)

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Determinants of Women's Education in the Middle East and North Africa: Illustrations from Seven Countries

by
Nagat El-Sanabary
(Consultant)

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FOREWORD

This paper is one of a series of papers that review the factors influencing women's education in developing countries. The papers were commissioned for a project in the Population and Human Resources Department on the determinants and consequences of improving women's education. The review papers examine the importance of family, school and community factors and of education policy in increasing the participation of girls and women in school and improving their achievement levels. They draw on the findings of a large number of published and unpublished studies of individual researchers, on Bank policy analysis and research, and on published reports of other organizations and of governments.

It is widely recognized that education is a critical factor in improving opportunities for women and in achieving development goals. Yet many girls and women in Third World countries face serious obstacles with respect to obtaining education. These barriers must be understood in order to fashion effective policies and programs to raise their education levels. It is hoped the review papers will contribute to improving that understanding.

Elizabeth M. King
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ABSTRACT

Despite considerable progress by Middle Eastern and North African countries in improving female access to and attainment of education at all levels, much remains to be done. This report focuses on three sets of highly inter-related determinants of access, achievement and outcome -- macro-level societal determinants, school characteristics, and family background characteristics -- in seven representative Middle Eastern and North African countries -- Egypt, Tunisia, Morocco, Jordan, Turkey, Saudi Arabia and Kuwait. The research shows that the level of economic development of a country and the distribution of income have a much stronger impact than do Islamic and cultural values, while the size and growth rate of the population can place a major strain on school facilities and resources. Sex-role stereotypes and the division of labor in the home and marketplace mean that expected returns from female education do not appear to justify the costs. Free, compulsory education and open admissions have led to major improvements in female education but have not guaranteed equity. Socio-economic background, parental education, family size and family socialization exert a strong influence on educational attainment. Other key factors are a family's ability to cover the costs of education and to forego the labor of daughters. The availability and accessibility of schools and the quality of their programs and human resources have significant effects on female educational enrollment, continuation, quality and outcome. All-girls' schools have played a positive role under certain conditions. Because of the importance of female teachers and administrators as potential role models, their high rate of attrition and absenteeism calls for careful solutions.

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EXECUTIVE SUMMARY

In recent decades, the Middle Eastern and North African countries have made much progress in female education. This progress is evidenced by the phenomenal growth in enrollment at all levels, the diversification of curriculum at the post-primary level and the increased opportunities in rural areas. As a result, the gender gap in education has narrowed. Nevertheless, the educational attainment of Middle Eastern and North African girls and women is still too low, and disparities persist, including: lack of full access to basic primary education; higher drop-out rates for girls than boys; inadequate access to vocational and technical education at the secondary level; and concentration in traditional female fields at the tertiary level. Within these generalizations, it is also true that major differences exist across and within countries. The implication is that, contrary to the prevailing notion, Islam is not necessarily an impediment to female education.

As with education generally, that for females is influenced by a complex set of macro- and micro-level determinants, including societal and school characteristics as well as family background. These are the focus of this paper. It examines the progress and ongoing problems with female education and the reasons behind them in seven representative Middle Eastern and North African countries: Egypt, Tunisia, Morocco, Jordan, Turkey, Saudi Arabia and Kuwait. The emphasis is on three sets of highly inter-related determinants of access, achievement and outcome: macro-level societal determinants; school characteristics; and family background characteristics. An analytic model is presented that summarizes the inter-relationships among the determinants and that can also serve as a policy-making tool.

Examination of the macro determinants of the supply of female education suggests that the level of economic development and the distribution of income have a much stronger impact than do religious and cultural values, which mainly affect the focus and content of education. Further, the size of the population and its growth rate can place a major strain on school facilities and resources. The prevailing sex-role stereotypes and division of labor in the home and marketplace, as well as women's low participation rates in the labor force give women's education a secondary value. Its expected

returns, as perceived by governments and parents alike, are too low to justify the direct and indirect costs.

This report examines the effects of these macro determinants on educational policies in general and gender-specifically. The conclusion is that free, compulsory education and open admissions have resulted in major improvements in female education but have not guaranteed equity because of family background and other constraints. Furthermore, the emphasis on higher education has diverted scarce resources away from basic primary education and delayed its universalization, especially among females. Finally, none of the countries reviewed here have specific policies aimed at eliminating gender inequity. Thus, the progress in female education has been a by-product of educational development generally.

As to other determinants, family background is very important to the demand and utilization of female education. Socio-economic background, parental education, family size and family socialization all affect female education directly and through dependent student attributes such as health, motivation and aspirations. A family's inability to cover the direct and indirect costs of education and female domestic labor are other major obstacles.

The availability of schools and the quality of the educational program and human resources have substantial effects on female educational access, continuation, content and quality, and outcome. All-girls' schools, which are preferred to coeducational ones, are found to have positive effects on the choice of curriculum and achievement, provided that they are accessible and enjoy comparable facilities and resources to those at boys' schools. The type and quality of the educational program determine how good the education females receive is. This report assesses educational methods and sex-role stereotypes in the curriculum in terms of their limiting effects on the female educational experience. Finally, the quality and availability of human resources in girls schools are key influences on female education. Women teachers and administrators are often less qualified than males and do not

have equal access to in-service education programs. In addition, little attention is paid to the special needs of married female teachers who have to juggle professional and domestic responsibilities. Attrition and absenteeism can be high and call for careful solutions.

This paper concludes with a brief description of efforts undertaken on behalf of female education by national governments, non-governmental organizations (NGOS) and some international organizations. It also outlines policy recommendations, reforms and compensatory measures to overcome the handicaps faced by women, particularly poor ones. The importance of universal primary education as one of the best means of breaking the vicious cycle of ignorance, poverty and disease is emphasized.

INTRODUCTION

Like their sisters in other parts of the world, girls and women in the Middle East and North Africa lag behind males in their access to various levels and types of education. Comparison with other developed and developing countries, using various indices of female educational participation and attainment -- female enrollment ratio, percentage of students who are female, particularly at the primary level, literacy rates and number of years of schooling -- often places Middle Eastern and North African countries at the lower rungs of the scale. Various writers have blamed the situation on the Islamic religion and Arab cultural traditions, which are manifest in gender segregation and veiling, a generally low status for women and their limited participation in public life. However, the major variations in educational access and participation by females among and within the Middle Eastern and North African countries suggest that other factors beyond religion and culture account for the disparities in educational opportunities. Some writers point to differences in the levels of development and exposure to Western cultural and educational influences, as well as demographic variables (El-Sanabary 1973, 1985; Chamie 1983).

This paper provides a framework for examining the macro- and micro-level determinants of female education. The macro-level determinants operate at the national level and influence government policies and decisions regarding the quantitative and qualitative aspects of the supply of female education, i.e., educational goals and objectives, numbers and locations of schools, capacity of educational institutions, who is to be educated, and human and instructional resources. Two types of micro-level determinants are examined: (a) family characteristics, which establish the level and type of demand for and utilization of girls' education; and (b) school-related variables, which determine whether girls enter school and what happens once they enroll. The paper also outlines the efforts of government and non-governmental organizations (NGOS) to enhance women's educational equity and suggests some policy measures to achieve this objective.

This paper focuses on seven representative Middle Eastern and North African countries: Turkey, Jordan, Egypt, Morocco, Tunisia, Saudi Arabia and

Kuwait. All are Arab except Turkey, which can be seen as a bridge between Europe, Asia and the Middle East, and which is also a member of the Organisation of Economic Co-operation and Development (OECD). Predominantly Muslim, the seven countries have a shared history of over five centuries. Geographically, Egypt, Morocco and Tunisia are located in North Africa, Turkey and Jordan in Northwestern Asia, and Saudi Arabia and Kuwait on the Arabian Peninsula. Politically, Morocco, Jordan and Saudi Arabia are monarchies, Kuwait a semi-monarchy, and Egypt, Tunisia and Turkey republics. Saudi Arabia and Kuwait are key members of the Gulf Cooperating Council. Economically, the seven countries are quite diverse. Saudi Arabia and Kuwait are affluent oil-exporters and members of the Organization of Petroleum Exporting Countries (OPEC). The others are low-middle income (according to the World Bank classification system). The countries also differ demographically: Turkey is the most populous, with Egypt a close second, while Kuwait has a small population. (See Table 1, which provides basic data on the countries.) Although all are Muslim nations, they differ in their interpretation of Islamic teachings with regard to women. At one extreme, Turkey and Tunisia have liberal laws regarding women and family status; at the other, Saudi Arabia subscribes to a very strict and conservative interpretation of Islamic laws. The similarities and differences among the countries have had a differential impact on female education, as revealed in this paper.

The first section provides an overview of female education in the seven countries and outlines some of the disparities and related issues. Section II discusses the macro-level determinants of the supply of girls' education, while Sections III and IV focus on the micro-level determinants: III examines the family characteristics that determine the demand for and utilization of education, while IV looks at school characteristics and their impact on female access, curriculum choices and educational attainment. Section V is devoted to measures undertaken by governments and NGOS to enhance women's educational access and attainment, as well as needed educational reforms and policy measures.

Table 1: Some Demographic, Economic and Educational Indicators, 1980-86, Illiteracy as Indicated

Country	Pop. (mil., mid-1986)	Natural Growth Rate (%)	Urban Pop. (%, 1985)	GNP/ Cap. (US$, 1986)	Illiteracy (%) Male	Illiteracy (%) Female	Life Expect. (1986)
Middle-Income/ Lower Middle							
Morocco	22.50	2.51	42.70	590	26.40[a]	55.00[a]	60
Egypt	49.70	2.66	44.60	760	70.50[b]	86.30[b]	61
Turkey	51.50	2.50	46.00	1,110	26.40[c]	55.00[c]	65
Tunisia	7.30	2.28	52.80	1,140	50.40[c]	75.50[c]	63
Jordan	3.60	3.68	60.00	1,540	37.00[d]	59.00[d]	65
High-Income Oil-Exporting							
Saudi Arabia	12.00	3.32	n.a.	6,950	28.90[e]	69.20[e]	63
Kuwait	1.80	3.16	n.a.	13,890	27.20[f]	40.90[f]	73

Note: n.a. Not available.
[a] 1971. [d] 1979.
[b] 1976. [e] 1980.
[c] 1984. [f] 1982.

Sources: World Bank (1988, Tables 1 and 6); UNESCO (Statistical Yearbook, 1987, Table 1.3).

I. AN OVERVIEW OF FEMALE EDUCATION AND DISPARITIES

A review of the burgeoning literature on Middle Eastern and North African women generally reveals a dearth of research on women's education in comparison with other areas. Reflecting the academic affiliation of researchers, most of whom are sociologists and anthropologists, the focus has been on women's status and roles, labor force participation in the modern and traditional sectors, family, fertility and related areas. In addition, most has been carried out by non-Middle Easterners. As to the limited research on female education specifically, it has tended to be theoretical except for a few recent empirical studies.

Middle Eastern and North African women are often included in international studies and statistical exposes of women's education. Whenever gender is used as a variable in educational attainment, Middle Eastern women

often appear at the lower rungs of the scale. A World Bank report, for instance, noted impressive improvements in women's education in recent years but also a persistent gender gap, serious attrition and low continuation rates (Kaneko 1987). National and international comparisons reveal that the illiteracy rates of Middle Eastern females are much higher than for Middle Eastern males or for females in other developing countries. Middle Eastern girls are less likely than boys to have access to primary schooling, and, once enrolled, they are less likely to complete the primary cycle or pursue post-primary education.

What these observations do not show, however, is that a Kuwaiti or Saudi Arabian girl now has a better chance of being educated than does a Moroccan or an Egyptian boy and that a middle-class urban girl in any of these countries may have a better chance of being educated than a poor village boy in the same country. Thus, gender is not the only variable explaining educational attainment in these countries, nor is religion the only factor behind the gender gap.

The data for Egypt, Jordan, Tunisia and Turkey all show a lower level of educational attainment among Middle Eastern females than among males (Tables A1, A2, A3 and A4 in the Appendix). Although most males and females above 20 years of age are either illiterate or have not completed primary education, even though they know how to read and write, the proportion of women in this category is much higher than that of men. The gender gap in educational attainment is narrow among the younger age groups because of the spread of education in recent years, as discussed below, and grows wider the higher the level of educational attainment.

The Remarkable Expansion of Female Education

Female enrollment has increased substantially at all educational levels in the seven countries, especially since the 1960s. (See Table 2, and note that the third-level figures in the table are for 1984.) Between 1975 and 1984-85, total female enrollment at all educational levels rose from 7,637,055 (35.7%) to 11,918,968 (41.33%). It rose from 5,567,242 (41%) to 8,104,523 (45%) at the primary level, from 1,845,163 (37%) to 3,283,135 (41%)

at the secondary level and from 224,650 (29%) to 531,310 (38%) at the tertiary level. These figures reflect major improvements in the educational situation of females relatives to males and to female education in other developing countries.

Diffusion of Education Among School Age Females

Enrollment ratios or participation rates reveal changes in the diffusion of education among school-age populations, male and female, between 1950 and 1985 (Table 3). While they demonstrate the considerable progress all seven countries made in extending educational opportunities among school-age populations, in every age group a smaller proportion of females than males was enrolled. Despite the faster growth of female secondary and higher education, female participation rates were steadily lower at the post-primary levels.

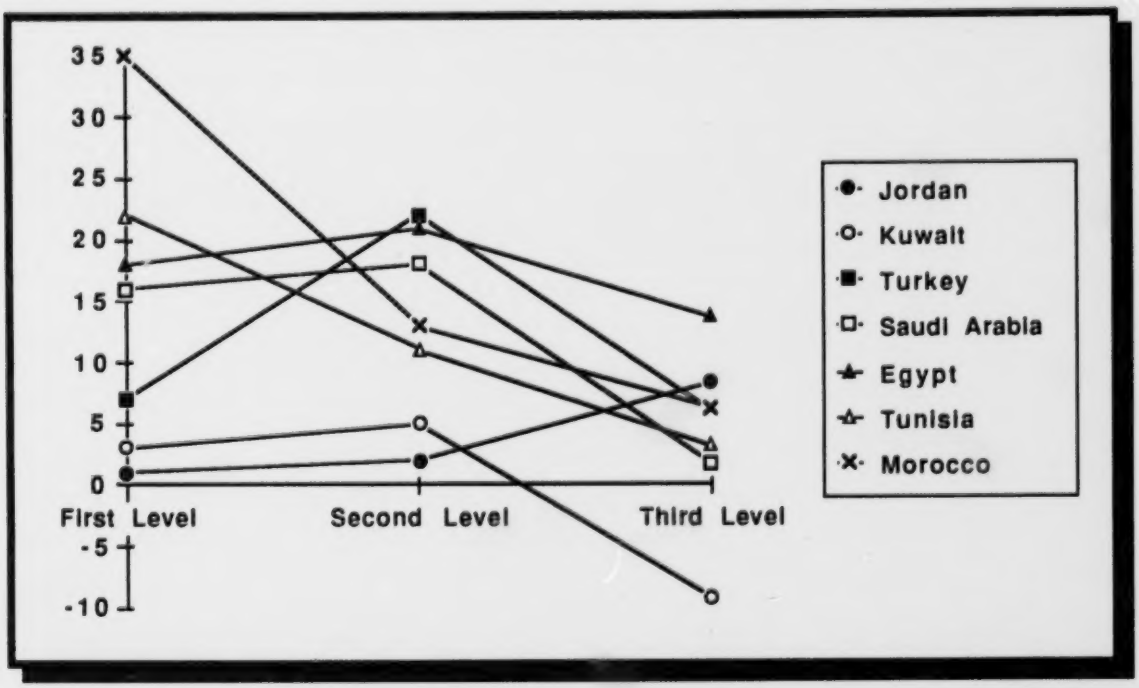
Table 2: Female Enrollment and Percent of Total Enrollment by Education Level, 1975 and 1985 a/

	First Level				Second Level				Third Level			
	1975		1985		1975		1985		1975		1984	
Country	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Egypt	1,601,608	38	2,605,071	43	744,997	34	1,199,197	39	144,096	30	267,938	32
Morocco	555,589	36	871,414	38	300,665	38	464,939	39	8,440	19	49,666	34
Tunisia	364,370	39	574,817	45	67,971	34	183,580	40	5,273	26	14,824	36
Jordan	179,394	46	253,437	48	66,856	41	199,893	48	3,969	33	23,824	44
Kuwait	51,099	46	84,175	49	49,127	45	112,780	47	4,608	57	12,754	54
Saudi Arabia	246,559	36	584,190	43	65,996	33	230,861	38	5,310	20	30,948	35
Turkey	2,568,623	45	3,131,419	47	549,551	31	891,879	35	52,954	16	131,356	31
Total	5,567,242	41	8,104,523	45	1,845,163	37	3,283,135	41	224,650	29	531,310	38

a/ The figures for the third level are for 1984.

Source: UNESCO (Statistical Yearbook, 1987).

Figure 1: Gender Gap by Educational Level, 1985



Source: Based on the data in Table 4.

Table 3: Changes in Gross Enrollment Ratios At the First, Second and Third Levels, By Gender, 1950-85

		First Level		Second Level		Third Level	
Country	Year	Male	Female	Male	Female	Male	Female
Egypt	1950	52	30	27	7	n.a.	n.a.
	1968	85	55	40	20	n.a	n.a.
	1975	89	60	55	31	18.5	8.3
	1985[a]	94	76	73	52	28.6	14.8
Tunisia	1950	51	19	11	5	n.a.	n.a.
	1968	100	83	29	11	n.a.	n.a.
	1975	116	78	28	15	6.3	2.1
	1985	127	105	46	33	7.2	4.0
Morocco	1950	31	11	1	1	n.a.	n.a.
	1968	72	36	18	6	n.a.	n.a.
	1975	78	45	21	12	5.2	1.2
	1985	98	63	38	25	11.9	5.7
Jordan	1950	71	25	7	1	n.a.	n.a.
	1968	100	85	54	24	0.95[b]	0.31[b]
	1980	105	102	79	73	28.90	24.20
	1983	98	99	80	78	41.50	33.20
Kuwait	1950	92	45	3.5	0.5	--	--
	1968	100	85	71	61	0.93[b]	2.53[b]
	1975	99	85	71	61	7.10	11.20
	1985	102	99	85	80	11.90	21.00
Saudi Arabia	1950	4	n.a.	0.2	--	0.24[c]	n.a.
	1968	44	18	12	2	1.05[b]	0.13[b]
	1980	75	50	36	23	8.80	5.00
	1985	77	61	51	33	12.00[a]	9.30[a]
Turkey	1950	56	36	7	3	4.54[c]	1.16[c]
	1968	93	61	34	14	4.38[b]	2.00[b]
	1980	103	92	40	19	14.80	3.10
	1985	119	112	53	31	11.80[a]	5.80[a]

Note: [a] 1984.
[b] 1969.
[c] 1960.
.. Not available.
-- Non-existent.

Source: Data for first and second levels, from UNESCO Statistical Yearbooks, 1970 and 1987; data for third level, from UNESCO Statistical Yearbooks 1971, 1972 and 1987.

At the same time, major differences existed among the seven states in the extent of the diffusion of schooling among the age cohorts at all levels. At the primary level, only Tunisia and Turkey seem to have com close to achieving universal primary enrollment.[1/] Egypt, Morocco and Saudi Arabia continued to have difficulty in this regard, especially for girls. In Saudi Arabia, however, it is probably just a matter of time until universal access is achieved, given that public education for girls started there only in 1960. While female education in Egypt dates to the second half of the nineteenth century, the gender disparities in primary education have persisted.

At the secondary level, the increases in female enrollment ratios in Kuwait were impressive and put it ahead of the other countries. Its compulsory cycle encompasses both primary and lower secondary levels. Interestingly, despite its lower ranking at the primary level, Egypt moved ahead of Turkey and Tunisia at the secondary level, with relatively high female enrollment ratios (52%) as compared to 33% in Tunisia and 31% in Turkey. Saudi Arabia was on a par with Tunisia and above Turkey. Jordan has bee relatively advanced in terms of female enrollment not just at the secondary but at all educational levels and has had a relatively narrow gender gap.

At the tertiary level, Jordan led the other countries, with very high enrollment ratios for both males and females. Egypt was second, followed by Kuwait and Saudi Arabia. Tunisia, Turkey and Morocco had the lowest female enrollment rates.

Persistent Disparities

Despite the phenomenal increase in female enrollment at all educational levels and the greater diffusion of education among school-age populations, gender disparities have been found at all educational levels (Table 4 and Figure 1). For instance, although Tunisia has been the most successful in extending primary education among girls, the gender gap was still relatively wide in 1984. Ironically, Egypt, which had the second

highest female enrollment ratio at the tertiary level after Jordan, had the widest gender gap. Figure 1 shows that, for most countries, the gender gap was lower at the higher level than at either the primary or secondary levels except in Jordan. This pattern reflects the elitist orientation of the educational systems.

Table 4: Gender Gap by Educational Level, 1985[a]

	First Level		Second Level		Third Level	
Rank	Country	Gap %	Country	Gap %	Country	Gap %
1	Jordan	0	Jordan	2	Kuwait	-9.1
2	Kuwait	3	Kuwait	5	Saudi Arabia	2.7
3	Turkey	7	Tunisia	11	Tunisia	3.2
4	Saudi Arabia	16	Morocco	13	Turkey	6.0
5	Egypt	18	Saudi Arabia	18	Morocco	6.2
6	Tunisia	22	Egypt	21	Jordan	8.3
7	Morocco	35	Turkey	22	Egypt	13.8

[a] The gender gap is the percentage point difference between gross male and female enrollment ratios.

Source: Computed from data in UNESCO (Statistical Yearbook, 1987, Table 3).

Attrition and Wastage: The Invisible Malaise

The under-representation of girls and women in education has been a result of both inadequate access and attrition and wastage. A growing body of literature indicates that Middle Eastern girls are more likely than boys to drop out of school before they complete the cycle, especially in rural areas. Research on Egypt, Morocco, Tunisia and several other countries documents this pattern. (See Hartley and Swanson 1986 and Cochran 1986 for Egypt; Youssef 1978b and Massialas and Jarrar 1983 for Morocco; and Deble 1980 and Chamie 1983 for several other Middle Eastern countries.) The reverse, however, is

true of Saudi Arabia and Kuwait, where girls have had consistently lower repetition and drop-out rates than have boys in primary and secondary education. This pattern has led their governments and educational planners to conclude that the internal efficiency of girls' education is higher than that of males (Arab Bureau of Education in the Gulf States 1983; Kingdom of Saudi Arabia 1985).

Unequal Access to Post-Primary Educational Programs

Female enrollment at the post-primary level is concentrated in general academic education, with severe under-representation in vocational and technical education in most countries (discussed in detail in Section IV). At the tertiary level, women converge toward the traditional female fields of education -- the humanities and social sciences. As in other Islamic countries, however, they are highly represented in medicine, and in Egypt and Turkey they are also well-represented in the traditionally male field of engineering.

II. MACRO-LEVEL DETERMINANTS OF THE SUPPLY OF GIRLS' EDUCATION

As with education in any country, that for girls and women is influenced by a complex set of demographic, sociological, cultural, political and economic factors (Psacharopoulos 1977, 80). The following discussion looks at five macro-determinants of educational policies and provisions of schooling for females: cultural and religious beliefs; level of economic development; general level of educational development; demographic characteristics; and structure of the labor force and women's participation in it.

Dominant Cultural and Religious Beliefs

The body of literature developed over the past 15 years documents changes in the position of women in various Islamic countries as a result

primarily of the spread of modern education. Nonetheless, Western misconceptions and stereotypes about Middle Eastern and Muslim women persist because of the dominance of a Western perspective and a lack of appreciation of the complex socio-economic forces affecting women's education and status in the Middle East and North Africa. In fact, empirical evidence on the effects of cultural traditions and values on the education of females in Islamic countries is scarce, except for a few attitudinal studies from Egypt, Tunisia, Morocco and Jordan.

The strongest indictment of Islam as the cause of the disparities in female education in Muslim countries generally comes from Finn, Dulberg and Reis (1979), who claimed that nowhere was the non-education of females so directly tied to religion and social custom as in the Middle East. They cited illiteracy and work force statistics to support their contention and concluded that liberal families allowed some education of girls before "purdah." They cited Bremer and Pauli (1971), suggesting that Islamic traditions sequester girls, prohibiting them from contact with the opposite sex and preparing them for engagement and marriage to the chosen man. Finn suggested that education was contrary to the social pressures on Muslim women to become wives and mothers. In their earlier writings, Smock and Youssef (1977) maintained that highly educated women were not regarded as good wives and that their marriage prospects became limited. Bowman and Anderson (1980) commented that women in elite Muslim families got most or all of their schooling at home, a conclusion that disregarded the millions of Middle Eastern girls in secondary and higher education in various Islamic countries. Subsequently, after examining the changes in literacy and enrollment rates and noting the progress in girls' education in many Middle Eastern countries, they acknowledged the difficulty of distinguishing cause and effect. They conceded that the belief in a Muslim pattern that excluded women from schooling was open to question. They speculated that poverty was the more likely reason.

In her recent writings, Smock (1981) also conceded there was no concrete evidence as to the attitudes of Muslim parents toward the education of daughters. She noted that identifying the effect of traditional culture

and social structure on family attitudes toward schooling and/or government policy was difficult for lack of research, except in a very few village-level studies.

Contrary to the Western stereotype, there is no inherent Islamic bias against education for females. Muslims quote the saying of the Prophet, "[t]he search for knowledge is the duty of every Muslim, man or woman," in support of female education. However, the following attitudes do influence educators and parents and inhibit female education. First, Muslims have a strong concern for the modesty and safety of girls and women. The desire to guard their honor is evident in the seclusion and veiling of females. Antoun (1968), Mernissi (1987), Saadawi (1985) and Abu Zahra (1970) provided some insights into the workings of this system and the limitations it imposes on the private and public roles of women. Othman (1964) stressed that it was Arab cultural traditions, rather than Islam, that constrained girls' education. The evidence of these traditions included opposition to co-education and male teachers in girls' schools; resistance to sending girls to schools away from home; and pressures on girls to marry at an early age.

Prevailing sex-role stereotypes and related division of labor in the home and marketplace have resulted in a lower valuation of female education. The "cult of domesticity" that characterized American and European states during the nineteenth and early twentieth centuries still holds in Middle Eastern and North African countries. The prevailing attitude is that women belong at home to care for family and children, while her male guardian -- husband, father, brother or older son -- should support her. This division of responsibility obviates the need for women to be educated or join the labor force to earn a living.

Middle Eastern women, as is the case all over the world, are accorded a lower social and economic status than are males.[2/] Furthermore, fear of the greater freedom and independence of thought and action that women gain through education has been a concern during the early history of girls' education, as was found in Egypt in the 1950s and 1960s and in Saudi Arabia in

the 1980s. The assertiveness, self-esteem and belief in gender equality that women may develop through education threatens those who espouse a traditional belief in male superiority. According to Nelson (1968), "the dilemma for both men and women is how to reconcile the man's self-image as dominant authority to the woman's emerging self-image as an equal" (p. 74).

Recently, there have been major, although uneven, changes in attitudes toward women and their role in all Middle Eastern and North African countries. While Western observers fear that the emergence of the so-called Islamic fundamentalism signals a reversal of women's roles and a return to the home, the actual impact of this trend on women's status, role and education is yet to be ascertained. Veiled, young girls and women who are also educated are seen in many Middle Eastern countries, especially on co-educational campuses, a sight that is incomprehensible to many observers (El Guindi 1981). To many Middle Easterners, veiling has been a way of reconciling the "public" and "private" spheres of women. As Egyptian and other Middle Eastern women venture into the public spheres of education and employment, they have found ingenious ways to bridge the two worlds and accommodate new opportunities within traditional cultural and Islamic values.

The existence of traditional attitudes and values calls for caution when talking about reforms for women in education and employment. Terms such as the liberation of women, equality of men and women, economic independence and the use of education as a means to reduce fertility have to be used carefully, since they have negative connotations, particularly among conservative parents and educators. Terms such as equality of educational opportunities, enhancing the welfare of the family and providing income-generating skills that contribute to family welfare are less threatening and more likely to generate support. It is unlikely that any policy-maker, educator or parent would challenge a woman's basic right to education. However, anything that threatens family stability or the welfare of children, including a reduction in fertility, is likely to be seen as cultural encroachment by the west.

Level of Economic Development

Middle Eastern and North African countries, as noted, represent extreme levels of economic development, from very poor to extremely wealthy. The seven countries reviewed here have per capita GNP ranging from a high of $13,890 in Kuwait to a low of $590 in Morocco (Table 1).

Several writers have stressed the important effect of national economic development on girls' education, giving illustrations from Kuwait (El-Sanabary 1973, 1978, 1985; Meleis, El-Sanabary and Beason 1979) and Libya and Bahrain (Chamie 1983). The data in Tables 2, 3 and 4 corroborate their findings, revealing the remarkable progress made by the wealthier Kuwait and Saudi Arabia in bridging the gender gap and extending education to larger segments of the school-age population. Despite their much more conservative social climate, Saudi Arabia and Kuwait have spent generously on education, using indigenous and external staff and textbooks. Within a relatively short time, they caught up with and even surpassed, at least numerically, other Middle Eastern countries with much longer histories of girls' education. For example, the latest enrollment figures put Saudi Arabia ahead of the more liberal Tunisia and Turkey. By comparison, the poorer Middle Eastern countries have been unable to provide the schools, teachers, equipment and facilities needed to educate a considerable segment of their population, despite compulsory education laws and free schools. For example, the two lowest middle-income nations, Morocco and Egypt, have had the greatest difficulty expanding educational opportunities and reducing gender disparities. Thus, insufficient educational facilities limit children's access to education, and participation rates reflect this scarcity.

General Level of Educational Development

The level of educational development as used here refers to the maturation of an educational system and society as revealed by the history, range and type of educational institutions and their distribution, as well as the literacy rate and educational attainment of the adult population. Some

Middle Eastern countries have advanced educational systems that go back more than a century, others have less developed and more recent ones. Generally, the more developed and diversified the educational system is, the better the educational opportunities for females are. However, oil has transformed this relationship, giving the wealthy states an edge over the poor ones. They may not have as much educational diversity as the more developed systems do, but they are catching up quickly.

Education tends to generate its own demand. Hence, educated people aspire and appreciate education for their children and often push them to acquire at least a level similar to their own. Schooling norms become a tradition, with the social demand for education perpetuating itself from generation to generation (Psacharopoulos 1977) (this point is discussed in detail in Section III).

In Middle Eastern and North African countries, educational access and participation by females, especially at the basic primary level, are higher in countries with high rates of male participation. Those that have universal male primary enrollment have come close to attaining it for females also, as has been the case in Kuwait, Turkey, Tunisia and Jordan. Those that are experiencing difficulties in universalizing primary education for males, notably Morocco and Egypt, have the lowest rates of female participation in primary education.

Demographic Characteristics

The interaction between demography and education is complex, with the following demographic variables affecting female education specifically and education generally: size of the population and its growth rate; structure of the population; and predominance of the rural population.

Size of the Population and Its Growth Rate

Demography and economics interact to influence the supply and demand for girls' education. On the one hand, the size of the population and its growth rate determine the educational effort required to reach the target age groups. On the other hand, economic resources limit what can be devoted to educational development. Ironically, the most populous states are also the poorer ones that lack the resources to educate their large and ever-growing school-age populations. Egypt, for example, with a present population of about 50 million that is growing at a rate of 2.5% annually and with per capita GNP of $760, has been struggling to satisfy the growing demand for education. Universalization of primary education, especially among girls, continues to be a major problem, and the quality of education leaves much to be desired. Morocco is also handicapped by a relatively large population of 22.5 million and a per capita GNP of only $590. In contrast, Kuwait, with a population of just 1.8 million and per capita GNP of $13,890, has, as noted, made remarkable progress. Saudi Arabia, with a much larger population than Kuwait, has made significant progress but is taking much longer to reach the educational level and quality achieved in that country.

In Egypt, Morocco, Turkey and Jordan, female education may be an important means of reducing fertility and population growth rates, while Saudi Arabia and Kuwait suffer from manpower shortages. They face a dilemma in that they are aware of the negative correlation between education and fertility and are very concerned that female education and employment could limit population growth (El Sanabary 1988).

Age Structure of the Population

Because of a generally high birth rate and low life expectancy, the population of Middle Eastern and North African countries is youthful: over 50% is under 20 years. According to a 1976 estimate for Morocco specifically, 46% of the total population of 18 million was under 15 and 56% under 20. Morocco's population is expected to reach 40 million by the year 2000 (Youssef

1978b). Egypt's population is also expected to double by that date to 100 million. The expansion of this very youthful base in both Egypt and Morocco has serious implications for expanding education in general and female education in particular.

Predominance of the Rural Population

Approximately 50% of the population of Middle Eastern and North African countries live in rural areas -- 58% in Morocco, 56% in Egypt and 44% in Turkey -- and some countries have relatively large nomadic groups. Girls and women in rural areas and among the nomadic population are educationally handicapped by their gender, residence and class. Their enrollment rates are consistently lower than those of urban populations. The literature about education in these countries highlights the rural/urban educational disparities, especially for females.[3/] The rural-urban disparities are caused by both the concentration of educational facilities in the more affluent urban areas and the cultural lag among rural inhabitants, and by the perceived irrelevance of school education to agricultural activities. In sum, girls and women in rural areas suffer from a low supply of educational facilities and poor incentives to enroll.

When a school is lacking in a rural community, the girls there may either commute daily to one in a neighboring town or may board where possible. The daily commute to school (either on foot or by undependable and often primitive transportation) may be costly and/or risky and is not always an option for many young village girls. Boarding facilities are not always accessible because they are costly and because of the social stigma against young girls living away from home.

Rural residence outweighs even gender as a determinant of educational access, as revealed by the higher female enrollment ratios in urban areas relative to either males or females in rural areas. In Morocco, for instance, in the late 1970s 71% of the girls in urban areas were enrolled in primary education as compared to 61% of the males and 18% of the females in

rural areas. An earlier study by this author (El-Sanabary, 1973) revealed similar disparities in other Middle Eastern countries.

The lower participation rates of girls in rural areas reflect both low rates of access and high rates of attrition. Attrition and repetition are serious problems affecting rural girls in many Middle Eastern and North African countries. In Morocco, they occur at all grade levels in primary education, especially during the fifth (the final) grade. Youssef (1978b) reported research findings indicating that of every 100 students who completed the primary level, only 10% did so without repeating, 26% repeated once and 42% repeated twice. Dropping out is also a serious problem in Morocco; the rate was estimated at 21% for boys and 28% for girls during the first year of primary school. Moreover, 50% of rural children who entered primary school never completed the cycle (Youssef 1978b). Similarly, Hartley and Swanson (1986) found that attrition rates were much higher in rural than in urban areas and among girls than among boys in Egypt.

Women's Participation in the Labor Force

One of the main functions of education is to prepare young people for their adult roles. Thus, women's roles in the family and the paid labor force have important implications for their education. The level and pattern of female participation in the work force are reflected in the goals and orientation of women's education. Both educational policy-makers and parents base their decisions, in part, on the perceived linkages between education and employment. The following discussion outlines briefly the level and pattern of women's participation in the work force in the seven countries and the effect first on educational policies and practice and, second, on the demand for female education. The discussion indicates that despite the vast expansion in educational and occupational opportunities for girls and women, the underlying purpose of education is still to prepare women for motherhood.

A relatively large volume of research on women's work in Islamic and Middle Eastern countries generally discusses participation levels and patterns

and associated factors. It shows that millions of Middle Eastern women play an important role in their countries' economies working outside the home in formal and non-formal occupations. They are not necessarily restricted to the domestic sphere, as commonly believed. Still, despite their growing numbers, their rates of participation are low compared with other developed and developing countries. In 1975, the percentage of economically active females in the modern sector ranged from 3% in Jordan to 8% in Morocco. Major variations exist across Middle Eastern countries, however, based on historical and local circumstances. Similarly, employment conditions vary considerably, ranging from the quite liberal and often mixed work environments in Egypt to the strictly gender-segregated ones in Saudi Arabia.[4/]

The sexual division of labor in the home and marketplace is common in these as in other developing and developed countries. Women are often concentrated in traditionally female fields of employment such as education, medicine and social welfare (Youssef 1974, 1976-77; Azzam 1979; Hammam 1986). There is a growing realization, however, that Middle Eastern women have played and continue to play a vital role in the agricultural and non-traditional work force either as non-paid family workers or small-scale business owners (Basson 1981; Hatem 1983; Hammam 1986; Larson 1988). Yet their educational needs have rarely been taken into consideration.

Education has opened new work opportunities for women, especially in the service sectors, in all Middle Eastern countries. During the 1970s and 1980s, rising inflation and the worsening economic situation in the poor countries, and oil wealth in the rich ones, have compelled many women to seek employment out of economic necessity or to support national development. This trend has changed the composition of the female work force, with the share of educated women rising and that of uneducated women declining. Although the majority of those entering the labor force are educated women, some less educated or uneducated ones are being employed in low-level jobs because of their lack of skills. Thus, in virtually all Middle Eastern countries, many women have had to accept menial or low-status jobs because they lacked

education and skill. Nonetheless, women still receive mixed messages regarding their role in the family and the wider society.

Effects on Educational Policies and the Supply and Demand for Female Education

The general level and pattern of female participation in the labor force in the seven countries has had a considerable impact on educational policies. Most policy-makers have given greater priority to male than female education, with the former considered an investment in human resources and the latter a consumption and luxury. Additionally, the level and type of female participation in the work force also shape girls' educational and occupational aspirations, educational choices and achievement levels. The structure of opportunity in the world of work affects girls' educational and occupational decisions. In the Middle East as elsewhere, education plays an important role in training women for work that is socially possible and permissible. Saudi Arabia is an extreme example of the effect of restricted female employment on girls' education. Because by law women's employment is limited to teaching, social welfare and medicine, despite the entry of women into numerous other jobs, there are severe restrictions on the educational choices for females.

The old concept of education as a prelude to government employment, inherited from the colonial era, has had a depressing effect on the supply of girls' educational facilities. Despite laws for compulsory education and proclamations about the right of all citizens to education, governments have designed education for job preparation, thus according a lower priority to the education of females because of their low levels of labor force participation.

In the 1970s, this concept was replaced by a new and more sophisticated one, "the manpower planning" approach to education. Governments, with the help of educational planners and international consultants, shifted their attention to preparing young men for high- and middle-level jobs required for industrialization and modernization. The result was emphasis on secondary and higher education to the relative neglect of primary mass education. Governments also emphasized vocational and

technical education for males, while girls had to content themselves with home economics classes that prepared them for their domestic responsibilities.

Because in many of these countries education has been perceived mainly as a means of obtaining a diploma for government employment, there has been undue emphasis on diplomas and degrees. This emphasis has made the concept of education irrelevant to the needs of most girls and their families. The low likelihood that girls will join the labor force and the traditional stigma among certain classes against women's employment have dampened parental support for girls' education (El-Sanabary 1973, 1985).

Unfortunately, this orientation continues to pervade both the developed educational system of countries like Egypt and the more recent system of Saudi Arabia, where unemployment among educated women has become a social problem. Egypt has had a problem of unemployment among the educated of both genders for many years, and now Saudi Arabia faces the same problem because of the expansion of women's higher education and the restrictions on their employment (El-Sanabary 1988). As a result of the traditional view of man as the provider in the family and woman as a dependent, some have argued that educated women are depriving men of their "natural right" to work, as they compete with them for scarce jobs. Consequently, many people in government, education and the general public in both countries are asking whether education has been wasted on women.

Educational Policies

In discussing the educational policies of Middle Eastern governments and their effects on females, it is useful to distinguish between two types: general and gender-specific or gender-focused policies (Klein 1987). General policies apply to all children regardless of gender. Intentional gender-specific policies may be classified as "gender differentiation" or "gender equity," depending on their bases and effects on the education of girls and women.

All Middle Eastern and North African countries have easily identifiable general educational policies that apply equally to males and females. However, delineating the elements of intentional gender-specific policies requires a detailed assessment that is beyond the scope of this paper. Where they exist, such policies are directed toward differentiation rather than equity. To date, no Middle Eastern country has issued gender-equity policies such as the "affirmative action" ones of the United States or England. Where gender-specific policies are not explicitly expressed, they are often implicit in educational practices.

The following four areas are examined as to their effects on the education of girls and women: compulsory education; admission and promotion policies; free education; and emphasis on general academic and higher education.

Compulsory Education

Compulsory education legislation has not guaranteed equal access of girls to education. The first of the seven countries to enact compulsory education laws were Egypt, (1923) and Turkey (1924). Egypt has encountered major difficulties in universalizing primary education, while Turkey has succeeded because of a deliberate policy of enforcing compulsory education laws. Although both countries set target dates for achieving universalization -- 1970 and 1972, respectively -- Egypt kept extending the date while Turkey made it a national commitment on social and political grounds. The Turkish government saw primary education as fundamental to democracy and a key channel for promoting modernization (Szyliowicz 1973).

In the 1970s, many economists, and the World Bank as well, believed that primary education was not as important as higher levels of education (see Harbison and Myers 1964; World Bank 1974). Reflecting the thinking of the 1970s with its low priority for primary education, Szyliowicz criticized the Turkish policy because of its massive fiscal and human resource requirements and a fear that it would lead to further deterioration in educational quality. To the contrary, it proved effective in reducing illiteracy rates (to 26% for

males and 55% for females) and raising the educational level of the population. Egypt, on the other hand, continues to suffer from high illiteracy rates (70% for males and 86% for females), and about 25% of school-age girls are not in school. Hartley and Swanson (1986) noted that in the schools they investigated, Egypt did not enforce its compulsory education laws and that they were "probably unenforceable" because of inadequate facilities.

In short, compulsory education laws are meaningless unless enforced and supported by adequate finances and facilities. Otherwise they can only serve as a shield against discriminatory allegations. Egypt will have to truly commit itself to universal access of girls to basic primary education and pursue adequate measures to improve the quality of their education and reduce wastage in order to raise the educational standard of females. This goal cannot be accomplished without political support (El-Ghannam 1970 as quoted in Chamie 1983; Silliman 1987).

Admission

All Middle Eastern countries have liberal open admission policies, especially for general secondary education and most higher educational institutions. Entrance is based on student scores in highly competitive national examinations. Although, theoretically, these policies apply to all children regardless of gender, class or other factors, they do not guarantee equity because educational motivation and achievement are strongly influenced by students' socio-economic status (SES) (as discussed in Section III). Furthermore, open admission cannot compensate for the lack of girls' schools in small towns and rural and remote areas.

It is also true that open admission does not apply to all types of education because of gender-specific policies that restrict or prohibit, explicitly or implicitly, female access to certain types of secondary vocational and technical education or certain fields of higher education. These policies are based on a belief in innate gender differences and prevailing notions about appropriate male and female educational and occupational spheres. Among the seven countries, Saudi Arabia has the most

explicit gender-specific differentiation policies, and it is the only Islamic country that has completely separate systems of male and female education. Nevertheless, it continues to expand women's curriculum options in higher education.

Free Education

All seven countries provide free education to both genders from primary through the tertiary and even graduate levels. Moreover, some provide scholarships and low-cost dormitory facilities at the university level. This policy has provided access to the lower socio-economic strata. Nonetheless, millions of children, mostly female, still cannot afford the other direct and indirect costs of schooling: clothing and shoes, books and school supplies, and fees of private tutors, now a necessity in most educational systems because of crowded classrooms and declining educational quality. In addition, there is the issue of income foregone or the opportunity cost of education, measured in terms of what a girl would have earned if she did not attend school. The reason that many international scholars and local educators have been critical in recent years of free publicly subsidized education (especially at the university level) is that it favors the urban bourgeoisie and helps perpetuate the elitist orientation of education (Psacharopoulos 1977; Psacharopoulos and Woodhall 1985; Coombs 1985; Todaro 1985; and much of the writing of Michael Carnoy). Free education is not enough, especially at the primary level. Added measures are needed to help with the other costs of schooling, as suggested later.

Emphasis on General Academic and Higher Education

The free and open admission policies, as well as emphasis on certification and degrees for modern sector employment, have created a dysfunctional imbalance in Middle Eastern and North African educational systems that has had important implications for female education. Two obvious manifestations of this imbalance are: the emphasis on general versus vocational and technical education; and the emphasis on higher education at the expense of basic primary education.

Access to higher education has opened new opportunities for women, as documented by statistics and research showing the advanced position of Middle Eastern women in higher education compared to other developing countries.[5/] Examination of the data on the number of students in higher education per 100,000 inhabitants highlights the relative advantage of Middle Eastern women at this level (Table 5). In 1984, relative to their respective populations, Kuwait had more females in higher education than either Japan or the United Kingdom, and Jordan had higher female enrollment than Japan, while Egypt's figure was only slightly lower than Japan's (Egypt's male enrollment was higher than that of the United Kingdom).

On the negative side, the emphasis on subsidized free higher education has been detrimental to basic primary education and has delayed its universalization, especially for girls. In addition, higher education has created an elite group of women and men and widened the gap between them and illiterate females (El-Sanabary 1975, 1985).

Table 5: Enrollment in Higher Education per 100,000 Inhabitants, 1975, 1980 and 1984

	Male			Female		
	1975	1980	1984	1975	1980	1984
Kuwait	635	739	1,039	1,009	1,330	1,679[a]
Jordan	594	1,313	1,721	313	1,183	1,452
Egypt	1,821	2,372	2,679	808	1,103	1,323
Saudi Arabia	555	882	1,032	154	403	753
Turkey	1,348	805	1,149	269	246	560
Morocco	426	892	1,093	97	267	547[b]
Tunisia	536	696	711	191	297	405
France	2,101	n.a.	2,355	1,845	n.a.	2,267
Germany F.R.	2,168	2,447	3,033	1,241	1,566	1,992
United Kingdom	1,716	1,924	2,030	920	1,056	1,572
Japan	2,773	2,820	2,675	1,284	1,333	1,357
USSR	2,045	n.a.	n.a.	1,803	n.a.	n.a.

Note: n.a. Not available.
[a] Data for 1985.
[b] Data for 1983.
Source: UNESCO (Statistical Yearbook, 1988).

III. MICRO-LEVEL DETERMINANTS: FAMILY CHARACTERISTICS

This section focuses on one set of micro-level determinants: family characteristics that affect the demand for and utilization of female education. Because these characteristics are often interdependent, isolating their effects is difficult.

Most research addresses the general effects of family socio-economic status (SES) on girls' education in terms of financial support; motivation; aspirations; health; cognitive and verbal development; and different socialization methods. Very few studies have studied specific family characteristics in isolation. Those that exist focus mainly on the effects of: parental education; parental occupation; and family size. All stress the important effects of family socialization on girls.

This discussion starts with the role of the family in socialization, then moves on to the effects of SES generally, and concludes by addressing the impact of two specific family characteristics -- educational level of parents and family size.

Socialization in the Dominant Cultural Values

Despite different adherence levels, prevailing cultural and religious values play an important role in the daily lives of Middle Eastern and North African families. As the basic social unit, the family has ultimate authority over its members, especially the young and female. Decisions regarding education, choice of career, marriage and even childrearing are a family affair.

As mentioned, Western writers and many Middle Easterners have emphasized parental attitudes as obstacles to female education. However, it is impossible to generalize about attitudes, since the variations are so broad. Moreover, empirical research on this subject is limited. The

following discussion is based on research findings on female education generally and the few studies done in Middle Eastern countries.

Sex-Role Socialization

The socialization of girls into differentiated gender-based roles has a major influence on their self-concept, motivation and aspirations and consequently on their educational and occupational choices and attainments. Socialization starts at a very early age and continues during the early years of schooling and beyond. It occurs in all societies and across many cultures, as eloquently discussed by Safilios-Rothschild (1986).

From the moment of birth, sons are valued more than daughters, although attitudes vary across classes and communities. Very little research is available on the dynamics of this process, however. In much of their writings, Egyptian Saadawi (1985) and Moroccan Mernissi (1987) have detailed the sharp distinction between male and female socialization from a feminist perspective and discussed the negative effects on girls' self-esteem and aspirations. In addition, Patai (1973) contended that there were no "child"-rearing practices in the Arab world, only "boy"- and "girl"-rearing practices. Generally, Middle Eastern girls are socialized into accepting the predominant sex-role stereotypes, with marriage and raising a family the ultimate goal. Schools continue to reinforce this differential socialization of gender divisions.

Despite the commonalities, major differences exist in socialization, expectations and amount of support parents provide for their daughters' educational and occupational aspirations, depending on the family's SES and specific characteristics. At the same time, parents' demand for education of their children is shaped not only by their attitudes and values, but also by their assessment of the cost and outcome of educational options. Under certain circumstances, they may feel the anticipated benefits do not justify the anticipated costs. For instance, if there are alternative income-

generating activities, they will prevail. Parents must be assured of some return to their investment in their daughters' education.

Family Characteristics

Socio-Economic Status

Family SES influences a daughter's education directly through financial and moral support for schooling or indirectly through a set of intervening variables such as health, physical, cognitive and psychological development, as well as her own motivation, aspirations and expectations. A family's per capita income determines its ability to support a child financially through schooling. Generally, girls and women from an upper and middle SES are more likely than girls from a lower one to enter school and progress to the tertiary level and even pursue graduate studies.

Upper-class families are able to enroll their daughters in public or private schools, at home or abroad, and provide them with financial and moral support. For instance, before Saudi Arabia opened its first public girls' school in 1960, many wealthy Saudi families sent their daughters to public and private schools in Egypt and Lebanon. They were also the first to take advantage of university education for girls when it became available at home (El-Sanabary 1988). Throughout the Middle East and North Africa, girls are a majority of the students in private schools and colleges, proof that well-off families place a high value on their daughters' education and will support them in expensive institutions. Professional Egyptian parents working in the oil-rich Gulf states are able to provide educational opportunities for their children such as at private schools and through extensive tutoring for the GCE British examination for college entrance. Many such children, male and female, are able to bypass the secondary education cycle completely by taking that examination and entering an Egyptian university or the American University of Cairo right after the intermediate education level. In Egypt, there is a whole new generation of these young people.

By comparison, working-class families are often unable to support their children's education, even in free public schools. In addition, they often need their children at home to care for their siblings. Thus, domestic and farm labor in urban slums and rural areas is a major barrier to female education. In many Middle Eastern countries, despite educational expansion and tuition-free schools, education is beyond the means of large segments of the population.

There is also growing evidence that SES level is a major determinant of girls' educational and curriculum choices. Those from working class backgrounds are more likely to enroll in vocational education, nursing and teacher training institutes than in academic education at the secondary level or in professional education at the tertiary level (Howard-Merriam 1979; El-Sanabary 1983). The non-academic secondary schools, which are low status, attract working class girls because they provide easy access to paid jobs. By comparison, professional higher education while prestigious, takes longer and is costly. It is therefore more accessible to the well-off. Female students in engineering, medicine and other professional programs tend to come from wealthier families (El-Sanabary 1985; Papanek 1985; Howard-Merriam 1979, 1981; and Moore 1980). For instance, in a study of Egyptian engineers in the early 1970s, they were found to have "elite social origin," while the women were more upper class than the men (Moore 1980).[6/]

Research conducted in Egypt and Latin America has revealed that a higher SES is associated with better health, body size, nutrition, and verbal and cognitive skills. These in turn have positive effects on children's school attendance, attention span, performance and achievement (Benson 1980; Balderston, et al. 1981). One study of children in extended families in four upgraded refugee squatter settlements in Jordan found that children in extended families had lower weights than the average for their age, with the effects being more intense for girls (Doan 1988).

Educational Level of the Parents

The educational level of parents influences girls' education independently or in association with other factors such as family size, occupation and place of residence and is probably the most important factor in determining a girl's educational chances. Educated parents are more likely to have access to resources and information, as well as contacts they can tap for the welfare of their children. Research conducted in Egypt found that parental education had the most influence on educational aspirations for children in both rural and urban areas (Cochrane, Mehra and Osheba 1986). The higher the educational level of the parent, the greater the expectations for education of their sons and daughters. A study in Jordan found the education of fathers to be systematically associated with the Schooling of daughters (Stuart 1981). A study of a sample of about 500 students in Kuwait University revealed that the majority came from families where both parents knew at least how to read and write; only 14% had illiterate fathers and 28% illiterate mothers (Al-Thaquib 1975).

The mother's education is particularly important to her children's chances of entry into school, success and persistence. A growing body of research from developed and developing countries has documented the multiple positive effects of a mother's education on her children. The largest body of literature pertains to the relationship between women's education and fertility (Ahdab-Yehia 1984; Al-Kadhi 1985; Egypt 1983; Nagi and Stockwell 1982; Youssef 1978a). Although the evidence is inconclusive, it suggests that a woman's education is inversely related to fertility (Cochrane 1979; Hallouda, et al. 1983; LeVine 1980, 1987). Educated mothers are likely to have smaller families and thus have more time for their care.

Educated mothers were found also to use different child-rearing practices than uneducated one; women who have attended school tend toward longer and more intense child care (LeVine 1987). Educated mothers have more knowledge and information, more cognitive and language skills and better social and psychological dispositions and are able to use them for the welfare

of their children. Furthermore, mothers with more schooling were found to be more responsive to infant vocalization and contributed significantly to the verbal development of their children (LeVine 1987).

Educated mothers provide more positive reinforcement of their children's educational and occupational achievement. Their standards and/or expectations for their daughters are different from those of uneducated mothers, and their daughters usually have higher confidence in their abilities to pursue higher levels of education (Bach, et al. 1985). Al-Thumali (1984) found that, in Saudi Arabia, the higher the educational level of mothers, the greater was their influence on their daughters' academic plans. Educated mothers can help their children with their schoolwork, especially during their early years of schooling, so that the need for expensive private tutors is less.

In Egypt, girls were the majority in the top 10 students in terms of grades on the General Secondary Education Diploma in both the science and humanities sections in 1988. All had parents with professional backgrounds and enjoyed supportive home environments. When interviewed by the press, most attributed their high achievement not to tutoring, but to self-discipline, good time management and regular daily study schedules from the beginning of the year. They may not have been coached by paid tutors but by parents who valued education and achievement.

In the Middle East and elsewhere, the higher a woman's education is, the more likely she is to be employed and, in turn, to be a good role model for her daughters. She is less likely to impart sex-role stereotypes and more likely to support her daughters' educational and occupational aspirations. A study of the gender-role orientation of Arab university students in Lebanon, Kuwait and Egypt found that the daughters of educated mothers had less stereotypical attitudes than did those who had uneducated mothers. A mother's work experience also had a positive effect on the attitudes of her sons and daughters (Lorfing and Abu Nasr 1985). As one woman respondent in an Egyptian survey stated, "By convincing and guiding me, my mother influenced my

thinking. She is experienced and has a strong personality. She molds my personality by encouraging me and having discussions with me" (Bach, et al. 1985, p. 375).

Family Size

While family size is associated with other factors, including family income and parental education and occupation, especially that of the mother, evidence of its effect on girls' education is scarce and inconclusive. It is suggested, however, that the smaller the family size is, the greater are the chances of daughters entering school and advancing up the educational ladder. Small families, even those of modest means, may not have to choose whether to educate a daughter or son. A study of parents' aspirations for their children's education found that larger families with children under 13 years of age had lower aspirations for the education of their children, especially daughters (Cochrane, et al. 1986). In another study, also in Egypt, the number of children in the family affected both home praise and self-confidence (Bach, et al. 1985). These findings are consistent with those of Rosen (1961), who argued that smaller family size allowed parents to commit more time to each child, thus enhancing their verbal and cognitive development and consequently their educational attainments (referenced in Bach, et al. 1985).

Despite the generally positive effects of a small family on schooling, family size may be insignificant if the family is wealthy or, in poor families, if elderly family members can relieve a girl from domestic responsibilities. In affluent Kuwait, Al-Thaquib (1975) found that, among a large sample of students at Kuwait University, 67.3% came from families of seven or more people and 19.8% from families with 4-6 members. This effect was also established by research conducted in Botswana and Taiwan (Chamie 1983).

Basson (1981, 1982) found that within the same family attitudes may differ toward girls' education. In Jordan, where many girls drop out of school to assist with domestic tasks or because villagers see 12 years of

education as unnecessary for marriage, many girls continued their schooling under harsh family circumstances. While one daughter would be taken out of school to help at home, another in the same family would be sent to a teachers' college and her marriage delayed several years. Like her unmarried brothers, she was expected to contribute cash income to the household (Basson 1981). The decision may depend on birth order, a girl's attitude toward school, school performance and expected outcome of continuing her education. It may be difficult to dissuade a highly motivated daughter. A family may also see benefits and tangible outcomes from her education in the form of a job, income or better marriage prospects (Basson 1981).

Heightened Expectations and Expanding Opportunities across Classes

Everywhere in the Middle East and North Africa, people's expectations for the education of their sons and daughters have risen sharply. People are not locked into their SES; rather, they tend to aspire to social mobility and to help their children avoid their disadvantages. Bach, et al. (1985) noted that many lower middle and working class urban families in Cairo had come to see maximum educational attainment as extremely important to enhancing their children's lives. In one of the largest surveys of Egyptian students and their families in the southern and western regions in Cairo, researchers found that parents placed a high value on their daughters' education and had to make economic sacrifices to enable them to continue their studies. Of the parents, 94.5% intended to allow their daughters to pursue an education and, of these, 84% thought in terms of a university education (Khattab 1984) as a means of their daughters entering prestigious jobs. For others, education of their daughters was compensation for their own lack of schooling. In many families, the tradition of education was a deciding factor. Eighty-two percent of the parents of limited means considered the cost of private tutors a burden on the family budget but were still willing to provide them to improve the scores of their daughters in the national examinations and to increase their chances of gaining access to universities. The girls also had high aspirations for their own education: majority wanted to become doctors and engineers, the two most prestigious occupations.

In an Egyptian fertility survey,[7/] parents were asked what level of education they desired for their children. While overall, 75% wanted a university education for their sons and over 50% for their daughters, there were very sharp regional differences (Hallouda, et al. 1983 as quoted in Cochrane 1986). People in urban areas generally had high aspirations for both sons and daughters; in rural upper Egypt, interest in a daughter's education decreased dramatically (Cochrane, et al. 1986). In a study of two rural communities in Egypt and Tunisia, Larson (1988) found that parents emphazed strongly their daughters' education as leading to an office job and an easier life. Similarly, in a study of a sample of 100 nomadic, urban and rural women in Saudi Arabia, Allaghi and Almana (1984) found that the majority of the urban and recently settled women interviewed wanted their daughters to complete their education up to the university level. This finding was true even for recently settled illiterate women, although some did not know the difference between the various educational levels.

Poverty, however, continues to stand in the way of many families and their aspirations for their children. Khattab (1984) noted that, in Egypt, lack of financial means and family poverty influenced parents to enroll their daughters in vocational education so that they could work after graduation and help support their families. Over 50% of the 46 cases in this group indicated financial need as the reason for their daughter not pursuing higher education, while early marriage was reported in only six cases.

IV. MICRO-LEVEL DETERMINANTS: SCHOOL CHARACTERISTICS

The second set of determinants of girls' education is school characteristics. They are important because they are more amenable to change and reform than either the macro variables or family characteristics. They can be manipulated to increase female access, persistence and educational relevance. The school characteristics examined here are types of schools,

physical characteristics, availability and quality of educational programs, and human resources. As with other determinants, they are interrelated, each working independently and in association with other factors to influence female access, achievement and persistence, as well as the type, level and quality of the education they receive.

School Type and Physical Characteristics

Single-Sex vs. Co-educational Schools

As discussed, because of prevailing social and religious values, Islamic countries oppose co-education, especially at the secondary level. The reason is their concern over the behavior of adolescent girls and boys in a mixed environment. Attitudes and policies vary, however, across countries and socio-economic groups. Saudi Arabia prohibits co-education beyond kindergarten, while in Turkey and Tunisia it is prevalent at all educational levels. In the other four countries, the general pattern is single-sex schools at the secondary level and both co-educational and single-sex ones at the primary and tertiary levels. Co-educational foreign and private schools, where female students outnumber males, are found in all these countries. Generally, all co-educational schools have both female and male teachers and administrators, while single-sex schools usually have teachers of the same gender as the students. None of the seven countries have women teachers in boys' intermediate or secondary schools, but several allow men to teach in girls' schools.

How does the prevalence of single-sex schools affect female access to education and the quality and outcome of their educational experience? Recent research, especially in England and the United States, indicates there is no simple answer. The effects may be positive or negative. The question is addressed here in terms of availability and quality of schools and their effects on: female educational access; curriculum choices; and female student achievement and persistence.

Availability and Quality of Girls' Schools and Their Effects on Access. Where educational authorities have to provide separate but equal educational facilities for males and females, particularly in sparsely populated areas and villages, such areas often lack girls' schools or schools with more than a few primary grades. Opening co-educational schools in these communities would not necessarily increase female access or persistence, however, because many parents would still rather keep their daughters at home than send them to a co-educational school.[8/] Attempts to solve the problem of scarce educational facilities in sparsely populated areas by adopting co-education may be counterproductive. In a previous study (El-Sanabary 1973), this writer suggested that the reluctance of some Arab governments to ratify the UNESCO Convention Against Discrimination in Education was its inclusion of a clause urging member states "to adopt the practice of co-education in first and second level education as one means of ensuring equality of access to education."

Single-sex schools are not necessarily discriminatory, according to UNESCO (1966), "so long as the same number of places is offered to pupils of each sex, and the conditions under which instruction is given are equal." Neither of these conditions prevail in the Middle East or North Africa, however, as girls' schools are fewer and often inferior in facilities and staff. This does not deny that there are excellent girls' schools as well as mediocre boys' schools. Generalizations about single-sex schools and their effects on female education can be misleading because of the vast differences in educational quality and backgrounds of students (Smock 1981). After reviewing several studies on the subject of co-education in primary basic education in developing countries, Chamie (1983) concluded that the negative impact is the result, in part, of having to provide separate facilities and the difficulty of recruiting female teachers for girls' schools. That is, the burden is on governments rather than on students.

Co-education at all levels in Islamic Middle Eastern countries has not necessarily enhanced female educational access beyond the universal primary level. Examination of data on the percentage of students who are

female (Table 2) does not show a special advantage in female access in either Turkey or Tunisia, where co-education is the norm. Actually, the female percentages in total enrollment and the enrollment ratios at the post-primary level are lower in these two countries than in several others where single-sex schools prevail, notably Kuwait and Saudi Arabia. In the latter, more girls than boys graduate from secondary schools, and they are close to achieving numerical parity with males in their strictly gender-segregated colleges (El-Sanabary 1988). The ranking of Kuwait and Saudi Arabia above Turkey and Tunisia stems from their oil wealth, which counterbalances cultural values and gender segregation. Thus, the issue here is not whether schools are single-sex or co-educational, but rather whether there are schools at all.

Effect on Curriculum Options. Girls' schools often use the same curriculum as boys' schools (except at vocational schools, discussed later). In addition, girls study home economics, while boys have corresponding male subjects. These electives are peripheral and of far less importance than the centrally-mandated core curriculum. Girls and boys alike have to compete in the same general examinations, which are centrally set and administered either at the end of the intermediate or upper secondary levels. As such, the possibility of individual choice of subjects along gender lines is reduced. As research in the west has shown, girls in single-sex schools choose math and science subjects more often than girls in co-educational schools. In Middle Eastern countries, girls who choose science subjects have an equal or better than equal chance of success in these subjects than have boys, as documented by the examination results, especially on the General Secondary Education Examination in several Arab countries, including Egypt, Jordan and Saudi Arabia. Over the years, girls have consistently achieved higher success rates and grades than boys. In Jordan, a study of two rural secondary schools showed that 56% of the girls and 46% of the boys passed the General Secondary Education Examination, results that reflected the scores for the whole country in 1983 (Layne 1984). In Saudi Arabia, a survey of 1,992 students, 222 teachers and 36 principals documented that girls outperformed boys academically in both science and literary subjects (Endargeeri 1986). Similar results were obtained in Kuwait, where girls attained significantly superior

results compared with boys in all science subjects but lower results in mathematics (Al-Methen and Wilkenson 1988). While skeptics attribute this outcome to girls having more time to study than boys, who have more personal freedom, it can also be attributed to the encouragement of their female teachers and parents and the need to excel in these national examinations to gain access to universities. Not to be disregarded is the desire of ambitious and aspiring young girls to prove themselves equal to males intellectually, if not personally.

Finally, the experience of the west shows that co-education does not mean elimination of curricular disparities for girls and women. Numerous scholars have pointed to the dual system of education within the co-educational systems of the US and Great Britain. In both countries, girls in mixed-sex schools have tended to choose literary subjects and humanities, whereas boys choose math and science. UNESCO studies corroborate this finding: despite the existence of mixed schools in many countries, the curricula followed by boys and girls often differ at the secondary level with regard to both vocational and technical subjects and to academic subjects, notably math and science (UNESCO 1983).

As in other areas of research on women's education in Islamic countries generally, the effects of co-education and single-sex schools is "terra incognita." A study of the effect of single-sex schools on fear of success and sex-role orientation among a sample of 626 Jordanian community college students revealed no difference in achievement motivation between males and females. However, the students in co-educational institutions revealed more sex-typed orientations (Ghanima 1986). One study of the education of Muslim girls in Ghana concurred with the more recent findings in western nations: in that country's co-educational schools, researchers found that teachers tended to ignore girls and put them in the back of the classrooms where they kept their mouths shut and may ultimately have dropped out.

It may be concluded that the effects of single-sex schools on curriculum choice and achievement are positive. Thus, there is no valid reason to question their academic viability, but rather to concentrate on ensuring quality in both girls' and boys' schools.

Effects on Persistence and Career Choice. Western research has documented that girls in single-sex schools are more likely to make less stereotypical career choices because of the emphasis on competition and excellence in all subjects and identification with strong role models such as women teachers in math and science and women principals. Despite the evidence, Massialas and Jarrar (1983) wondered about the effects of women teachers on girls in single-sex schools. They argued that since very few women, in comparison with men, are in key professional positions, female students have limited opportunity to emulate women with successful careers. In the absence of dominant and well-known female models, they asked, what kinds of images do females receive through school and the mass media? Does their self-concept become limited? On the contrary, despite women's limited participation in the work force in Middle Eastern and North African countries, there are strong and dominant role models in the schools and mass media in many countries, notably Egypt.

In view of the above discussion and the absence of research, it is suggested here that quality single-sex schools, especially beyond the primary grades, should have a positive effect on female persistence and advancement. Girls must have the opportunity to acquire the basic literacy and numeracy skills needed for productive living at home and in the community. Providing adequate educational facilities past the first four primary grades should enhance their access and continuation rates.

Geographic Distribution of Schools

As Section II pointed out, the availability of a school in the local community enhances access advancement by females. Literature on parental aspirations for children's education in Egypt showed that distance to

secondary school had a significantly negative effect on the aspirations of mothers for their daughters' education (Cochrane, et al. 1986). Interviews with parents in Tunisia, Morocco and Egypt indicated a reluctance by parents to send their daughter to distant schools because the commute might entail morally or physically damaging incidents (Allman 1978, 1979; Basson 1981). This reluctance applies whether the girl has to commute or live in boarding facilities and is especially true if she is needed at home to help with domestic or farm work.

Supporting School Facilities

In the Middle East and elsewhere, girls' schools are often not only inferior in general physical condition, but lack specialized educational and recreational facilities such as libraries and laboratories, audio-visual equipment, boarding options and cafeterias, and possibly clinics. These deficiencies detract from their quality and general appeal. Well-supervised boarding facilities, for instance, are especially important in attracting girls from remote areas. As part of its massive effort to universalize primary education in the early 1970s, the government of Turkey set up regional boarding facilities for children from sparsely populated areas. This measure should be effective with girls in secondary schools and colleges, although not with younger ones. Boarding facilities are essential at teacher training and nursing institutes.

Availability and Quality of Educational Programs

This section deals with four areas of curriculum content and teaching methods: access to academic and vocational education programs; teaching methods; sex-role stereotypes in textbooks; and educational counseling and occupational guidance.

Access to Academic and Vocational Education Programs

Not only is it necessary to provide accessible educational facilities for girls, but they must also be appropriate to their needs and those of their communities and wider society. The type and level of educational programs available for girls reflect general government policy and individual demand for female education. The following discussion focuses on upper secondary education, where differentiation of curriculum options and tracking occur.

Generally there are three types of secondary education in Middle Eastern and North African countries: general academic, teacher training and vocational/technical education. The latter is divided further into industrial, commercial and agricultural. There are also nursing education and schools of domestic sciences for girls. Table 6 provides statistics on female secondary education enrollment, distribution among the three main types and the percentage of girls in total enrollment at both the lower and upper secondary levels, i.e., intermediate and secondary proper, in each type of program. The following observations are based on these data and literature on the subject (El-Sanabary 1973, 1983; UNESCO, several reports; and OECD 1986).

The bulk of female (as well as male) secondary education enrollment in the seven countries converges toward college-preparatory academic programs, ranging from 73% of female secondary students in Egypt to over 99% in Kuwait and Saudi Arabia. Between 1975 and 1985, a remarkable increase occurred in female secondary education enrollment in all seven countries.

The following discussion addresses two specific areas: (a) the predominance of girls in academic general education; and (b) their limited access to vocational and technical education at the secondary level and their concentration in traditional female fields at the higher levels.

Predominance of Girls in General Secondary Education. The predominance of girls in college-preparatory general education is a result of

prestige and abundant supply. Only those with the highest grades are admitted from the intermediate secondary graduating classes; it is the "right" education for bright, hard-working, ambitious girls. This education prepares qualified females for colleges and universities and increases their educational attainment. As noted, in these schools girls pursue the same curricula as boys. The proportion of girls who enter the scientific track in preparation for college is relatively high. Their entry is determined by their academic abilities, motivation, career aspirations and family support.

Table 6: Enrollment of Girls in Secondary Education and Their Percentage in Total Enrollment, by Type of Education, 1975-85

Country		Total Secondary		General Ed.		Teacher Ed.		Vocational Ed.	
		Enroll.	% Fem.	Enroll.	% Fem.	Enroll.	% Fem.	Enroll.	% Fem.
Egypt	1975	744,997	34	603,618	34	14,509	44	126,870	34
	1982	1,199,197	39	880,115	38	33,831	53	285,251	39
	1985	n.a.		1,074,780	40	n.a.	n.a.	n.a.	n.a.
Morocco	1975	n.a.	n.a.	n.a.	n.a.	1,716	43	n.a.	n.a.
	1980	300,665	38	298,344	38	--	--	2,321	23
	1985	464,939		432,066*	39	--	--	14,120	53
Tunisia	1975	67,971	34	49,889	34	554	52	17,528	31
	1985	183,580	40	149,825	41	2,758	70	30,997	36
Jordan	1975	66,856	41	64,963	41	--	--	1,893	29
	1985	159,899	48	147,809	48	--	--	12,090	39
Kuwait	1975	49,127	45	48,928	46	--	--	199	15
	1985	112,780	47	112,692	47	--	--	88	9
Saudi Arabia	1975	65,996	33	61,673	33	4,064	29	259	6
	1985	230,861	38	224,785	39	4,848	46	1,228	10
Turkey	1975	549,551	31	433,492	32	25,181	47	90,878	28
	1985	1,030,948	35	853,588	37	11,357	35	173,396	28

* 1984.
Note: -- Non-existent

Source: UNESCO (Statistical Yearbook, 1987).

At the same time, there are several problems. Not all those who enter secondary schools complete the cycle, and not all who complete it achieve the grades required for college admission. Those girls who do not make it end up without marketable skills, since their education had prepared them only for higher education. Since most are likely to come from lower socio-economic backgrounds, they need employment to improve their own and their families' living standards. The lucky ones find office jobs, but for most their education is a dead-end. The well-off, however, have ways of beating the system and gaining access to college.

Limited Access to Vocational and Technical Education. Access of girls to technical and vocational education in Arab countries was addressed at numerous regional conferences on education and at two special UNESCO conferences, one in Algeria in 1964 (UNESCO 1964) and the second in Kuwait in 1969 (UNESCO 1969). The concerns expressed then persist, and the recommendations are still valid.

In vocational education a large proportion of female enrollment is in the domestic sciences. Statistics for Turkey indicate that about 50% of secondary education enrollment is in this specialty (Table A5). Female access to vocational education in both Kuwait and Saudi Arabia is negligible; it is limited to sewing and tailoring schools and nursing institutes. Enrollment in secondary teacher training declined because of the upgrading of primary teacher training to the junior college level in Morocco, Jordan and Kuwait.

Several factors account for the low access of girls to technical and vocational education in Middle Eastern and North African countries. Participants at the 1969 UNESCO conference attributed it to dominant beliefs, attitudes and concepts concerning the nature and aptitudes of women and types of work and occupations suitable for them (El-Ghannam 1970). Sex-role stereotypes limit the supply of vocational education for girls, and its low status depresses the demand for existing programs. The attitude that a woman's place is in the home prevails, obviating the need for job-related

technical and vocational education, and the stigma of vocational school being a repository for the untalented discourages those who may need it.

These attitudes are strongest in Saudi Arabia and Kuwait, as reflected in the virtual lack of vocational education for girls. Because of their unique situation, Kuwait and Saudi Arabia are not included in the following discussion, except to note that in recent years Saudi Arabia has faced mounting pressure from female secondary school graduates for entry into colleges and universities. In response, officials have been considering vocational education to prepare girls for work in factories for women patterned after the sweat shops of the west, where women can use their "nimble little fingers" in traditional textile and garment industries.

Sex-role stereotypes account for the predominance of girls in certain vocational programs such as domestic science and commercial education. Their relatively high participation in the latter is based on the western stereotype of clerical office work as woman's work, especially in Egypt, Turkey and Jordan. Thus, in commercial schools girls focus on clerical tasks rather than management. A study by UNESCO (1969) found that girls in Jordan commonly chose typing, stenography, accounting, book-keeping and other secretarial and office skills, as the employment opportunities for women in these fields were good, especially in the private sector.

The general conclusion is that Middle Eastern and North African educational systems, as in other parts of the world, tend, intentionally or not, to reflect gender relations and the gender-based division of labor in the home and the marketplace. The prevailing sex-role stereotypes are based on a belief in innate gender differences. Education has helped inculcate, reinforce and reproduce gender differentiation and gender-based division of labor, to varying degrees, in the seven countries.

The effect of curriculum options on gender differentiation has received much attention over the past decade in the United States, Britain and Australia. The extensive literature is also relevant to women's education in

Middle Eastern and North African countries. Finn, Reis and Dulberg (1980) argued that schools promote gender differentiation through modeling of gender appropriate behavior; exposure of students to specific subjects; and academic support provided to students.

A series of surveys carried out by the UNESCO National Commission in various countries, including Jordan and Turkey, was the basis of a study on gender differences in secondary school curricula published by UNESCO in 1981. The surveys revealed extensive differentiation based on perceived norms and not individual abilities or interests. This situation was the major hurdle facing girls in education (UNESCO 1983). In Jordan, while both boys and girls followed the same courses, girls tended to become typists or secretaries while boys normally tried for jobs in management or continued on to the university or polytechnic institutes. In the new comprehensive schools that were introduced experimentally to integrate general academic and vocational subjects, there were still disparities across genders. In boys' schools, a wide range of traditional male vocational subjects was offered, whereas the girls' school in Amman offered the traditional female subjects -- dressmaking, art, ceramics, child care and hairdressing. The girls studied all four subjects in the first year and specialized in the last two years.

Vocational training followed gender lines as well. In trade training schools that were not part of the secondary cycle in Jordan, boys learned traditional subjects, whereas girls studied home economics plus 24 hours of "practical" subjects including beauty culture, dressmaking and ceramics (Cameron 1983). In the vocational schools run by the United Nations Relief and Work Agency (UNRWA), curriculum stereotypes existed as well. A recent study by the World Bank of alternative means of vocational education and technical training made no reference to girls, an indication that they were not considered a target group (Haddad 1986).

Inadequate vocational education places women at a disadvantage in the job market. Several researchers have found that in most of these countries, many women have had to settle for low-paying, low-status jobs

because they lacked the necessary skills (Hatem 1983; Hammam 1981; and Rihani 1983).

Concentration in Traditional Fields at the Tertiary Level. The concentration of girls in general secondary education is reflected in their distributing the various academic disciplines at the post-secondary level: they tend to enter traditional female fields in the humanities, social sciences and education (Table 7). However, because of traditional values that encourage women to enter occupations that serve other women and because of the Muslim aversion to the treatment of women patients by male doctors, females are well-represented in medicine in all seven countries. Further, because of their relatively high access to math and science at the secondary level in many Middle Eastern countries, their representation in engineering and natural sciences is generally higher than in many Western nations.

Stereotypes in School Textbooks

Much has been written in the West about sex-role stereotypes in school textbooks and their effect on educational and occupational aspirations and choices. Two studies on this subject, one in Arab countries (Abu Nasr, Lorfing and Mikati 1983)[9/] and another in Egypt (Mohamed 1985), corroborated the research findings in western literature, with a slight difference. According to Abu Nasr, et al., in the Arabic textbooks, the most important roles cited for women were mother and little girl, while the role of wife was mentioned less often and mostly in the Saudi Arabian textbooks. Women in other roles such as widows, older daughters, fighters, dream woman, fantasy woman, princess, wife, historical figure, slave, witch, aunt, cousin and neighbor figured in less than 10% of all roles mentioned.

Table 7: Female Enrollment and Its Percentage of All Students in Higher Education, By Field of Study, 1984

Field of Study	Egypt		Jordan		Morocco		Tunisia	
	Number	%	Number	%	Number	% F	Number	% F
Total Female Enrollment	206,570	34	23,825	44	47,952	34	14,824	36
Education Sc. and Teacher Training	38,604	45	8,582	78	91	36	806	31
Humanities, Religion and Theology	42,319	46	2,991	55	27,569	42	4,536	44
Fine and Applied Arts	3,063	43	225	56	--		182	49
Law	18,227	22	149	34	4,854	23	1,255	38
Soc. and Behavioral Sciences	2,283	42	1,090	42	3,222	27	875	34
Commerce and Business Admin.	45,942	31	3,920	33	--	--	1,345	36
Mass Communic. and Documentation	821	54	154	24	--	--	280	56
Home Economics (Domestic Sc.)	1,404	82	32	100	--	--	71	39
Service Trades	570	59	5	2	--	--	66	20
Natural Sciences	9,072	35	1,400	44	10,075	27	1,220	32
Math and Computer Science	309	27	938	30			382	22
Medical Sc. and Health	20,316	39	2,440	55	2,075	31	3,036	52
Engineering	7,123	13	1,019	15	66	11	359	10
Architecture and Town Planning	n.a.	n.a.	n.a.	n.a.	--	0	70	19
Trade, Crafts, and Indus., Prog.	n.a.	n.a.	--	0	--	0	15	17
Transport and Communications	n.a.	n.a.	--	n.a.	--	0	71	11
Agriculture, Forestry and Fishery	14,137	31	395	36	--	0	71	19
Other/Not Specified	2,186	35	485	20	--	0	--	--

(Continued)

Table 7: (continued)

Field of Study	Turkey Number	Turkey % F	Kuwait Number	Kuwait % F	Saudi Arabia Number	Saudi Arabia % F
Total Female Enrollment	131,356	31	11,639	53	35,101	37
Education Sc. and Teacher Training	24,675	42	2,086	70	9,300	54
Humanities, Religion and Theology	9,145	36	1,889	58	15,917	40
Fine and Applied Arts	2,288	48	112	55	--	--
Law	8,814	46	336	32	--	
Soc. and Behavioral Sciences	26,684	29	1,702	54	1,548	40
Commerce and Business Admin.	14,373	30	1,835	58	2,276	23
Mass Communic. and Documentn.	2,123	46	--	0	--	--
Home Economics (Domestic Sc.)	565	98	132	100	700	100
Service Trades	813	24	--	0	--	--
Natural Sciences	6,722	44	1,184	52	3,328	35
Math and Computer Science	2,989	41	701	63	n.a.	n.a.
Medical Sc. and Health	15,237	39	573	69	2,160	41
Engineering	13,202	17	579	25	--	0
Architecture and Town Planning	3,564	48	--	0	n.a.	n.a.
Trade, Crafts, and Indus. Prog.	428	43	n.a.	n.a.	n.a.	n.a.
Transport and Communications	--	0	--	0	--	0
Agriculture, Forestry and Fishery	3,734	25	--	0	463	20
Other/Not Specified	--	0	510	35	--	--

Note: -- Non-existent.
n.a. Not available.

Source: UNESCO (Statistical Yearbook, 1987).

Working women were portrayed as engaged in traditional feminine occupations -- teaching, nursing, pediatrics, dressmaking, administration of girls' schools (headmistresses), textile factory work, domestic help and agricultural work. Reference to working women was most frequent (22%) in the People's Democratic Republic of Yemen, where they were presented as shouldering the dual burden of domestic and agricultural work. Egypt and Tunisia came next, with women workers making up 16% and 11% of the references, respectively. Although the Tunisian textbooks referred to mothers engaged in income-generating activities, in cases of pressing economic need the division of labor was clear: mothers were baking cakes at home for their sons to sell in the market.

The textbooks stressed a number of acceptable "feminine" traits weakness, sensitivity, submissiveness, dependency and self-sacrifice. They were seen as deriving their identity and status from conformity to gender-based-role expectations and from the performance of the roles of mother, dutiful wife and obedient daughter. Mohamed (1985) concluded from a study of Arabic elementary reading textbooks that they did not reflect the changing roles of women in Egyptian society, nor did they represent women in equal proportion to their numbers (they were only 20% of the characters portrayed in these books).

In short, textbooks perpetuate the sex-role stereotypes and potentially limit girls' educational and occupational aspirations and choices.

Lack of Educational Counseling and Career Guidance

Educational and vocational guidance is necessary to help girls and women realize their capabilities and potential, as well as make practical and non-stereotypical career decisions. As UNESCO (1983) noted, guidance has frequently been lacking or is provided too late to influence pupils' attitudes and comes after key decisions have been made. In the absence of educational and vocational guidance, students and their parents make decisions based on their own generally outdated perceptions of women's roles and limited

knowledge of educational and career options. A common result is premature specialization. This lack of proper guidance contributes significantly to the mismatch between girls' education and employment opportunities. The UNESCO report advised that for educational guidance and career counseling to be effective, it should involve schools, training establishments, parents, community organizations, public authorities and trade unions.

Teaching Methods and Curriculum Relevance

In the seven countries, some poor parents either decline to send their daughters to school or take them out before they finish the educational cycle because they do not perceive education as relevant to their needs. This perception stems from the emphasis on academic subjects and certification, outmoded teaching methods and lack of basic educational materials and resources.

Emphasis on Academic Subjects and Certificates. In terms of orientation, education at every level is considered to be a preparation for the next level, the ultimate purpose being a degree and an office job. Since this option is not viable for many girls, they and their families consider school education to be irrelevant for productive living. Centrally produced textbooks exacerbate this notion by ignoring regional differences and needs.

Emphasis on Lectures and Memorization. The emphasis on abstract facts with no relevance to the realities of students' lives detracts from a school's appeal. This educational approach targets the hardworking and highly motivated, ignores individual differences and disregards children who need special assistance and support. Those most likely to suffer are girls who are poorly motivated and malnourished or who have other demands on their time. Given the congestion in classrooms in most countries and the poor qualifications of many teachers, there may be no alternative to memorization of facts to be recalled during poorly conceived and written examinations.

Another problem is that the automatic promotion policies introduced in some countries to reduce repetition at the primary level permit students to move up without having acquired basic skills. Schooling becomes an exercise in futility. Discouraged children are then withdrawn from school. Consequently, there is a serious attrition problem in most of the countries.

Lack of Instructional Materials. Most schools in rural areas lack basic instructional materials, even a chalkboard and chalk. Textbooks are unavailable or inefficiently handled. In Egypt, where textbooks are distributed annually to students free of charge, many ultimately end up as wrapping paper in grocery stores. Audio-visual materials are unheard of except in some schools in wealthy countries such as Kuwait and Saudi Arabia. Ironically, with external educational assistance, modern educational technology such as computers are being introduced, on a limited scale, in some rural schools. However, they are not accessible or feasible for most schools. What is needed are simple, inexpensive and readily available media, such as radio, posters, film, and instructional toys that can be produced easily and cheaply locally.

Availability and Quality of Human Resources

Teachers: Their Availability and Quality

Women teachers are the backbone of female education where schools are gender-segregated, and their availability and quality affect female access, educational quality, achievement and persistence.

As in all the Middle Eastern and developing countries, women and men teachers are underpaid, undertrained and underequipped, and work conditions are poor (Cameron 1983). They are often among the most neglected professionals in both developed and developing countries. The most talented students do not enter the profession, and many good teachers get discouraged by the working conditions and transfer to more prestigious or remunerative occupations.

Shortage of Women Teachers. Despite their predominance in teacher training institutes (TTI) and teachers' colleges, Middle Eastern women are a minority in this typically female profession, especially at the post-primary level. The data in Table 8 provide some insight into their participation in the teaching profession in the seven countries. There was substantial growth in the number of female primary and secondary school teachers between 1975 and 1985: their numbers more than tripled in Tunisia, Morocco and Saudi Arabia, almost doubled in Jordan and Kuwait, and rose by 65% in Egypt. Only Turkey, which had achieved universal primary enrollment, showed a modest increase. Nonetheless, only in Jordan and Kuwait were women teachers a majority, and their ratio continued to rise. At the secondary level, there was an equally dramatic increase in the number of women teachers and their percentage in all teachers except in Turkey. Only in Kuwait, however, did women make up 51% of secondary teachers, with Jordan a close second at 48%. Despite the narrowing gender gap in the teaching profession, women were just over one-third of all secondary teachers in the remaining six countries in 1985.

Table 8: Number of Women Teachers and their percentage to all teacher at the Primary and Secondary Levels, 1975-85

	Primary Educ.				Secondary Educ.			
	1975		1985		1975		1985	
Country	Number	%	Number	%	Number	%	Number	%
Egypt	56,323	48	93,253	48	20,962	27	51,121	34
Morocco	7,725	21	27,361	33	n.a.	n.a.	18,393	26
Tunisia	5,597	24	15,641	38	2,475	28	7,918	31
Jordan	5,719	51	11,193	66	3,027	39	8,690	45
Kuwait	3,471	55	6,586	68	4,564	49	8,664	51
Saudi Arabia	10,568	31	35,393	42	3,360	24	17,478	41
Turkey	86,205	41	88,855	42	41,414	35	49,601	36
Total	175,608	39	278,282	48	75,802	34	161,865	38

Source: UNESCO (Statistical Yearbook, 1987, several tables).

The same factors that depress women's educational access have tended to restrict female access to and persistence in teaching. They vary from one country to another and from one region to another in the same country. They include: cultural attitudes; financial constraints; increasing devaluation of the teaching profession, especially at the primary level; difficulty in recruiting and retaining female teachers in rural and sparsely populated areas; lack of mobility of women because of family responsibilities or cultural considerations; and the added difficulties of married women teachers. Despite their importance for the quantitative and qualitative development of girls' education, no research has addressed the supply of women teachers or the problems they and their schools encounter because of their special needs and circumstances.

In most Middle Eastern and North African countries, the marked educational expansion over the past few decades has not been matched by sustained measures to train teachers and administrators. Most countries have teacher shortages, especially in math and science, foreign languages and even native languages. However, the nature and intensity of the problem vary across countries in the region. North African and Arabian Gulf states suffer particularly from shortages of indigenous teachers. In Morocco, for instance, replacing European teachers with Moroccans has been a challenge since independence, especially at the upper secondary level. In 1977/78, the ratio of Moroccans to all women teachers was less than one-third at the secondary level and two-thirds at the intermediate level (Cameron 1983). Heavy reliance on expatriate teachers is a problem in all oil-exporting Gulf states such as Kuwait and Saudi Arabia (Meleis, El-Sanabary and Beason 1979; El-Sanabary 1988): in 1979/80, only 15% of all women teachers at the intermediate and upper secondary levels were Saudis. These figures were expected to rise to 46% and 42%, respectively, by 1984/85, but it is not known whether this has actually happened (Kingdom of Saudi Arabia, 1980). "Saudization" of primary teaching staff in girls' schools was realized by the mid-1980s except in some rural areas, where the output of local teacher training institutes has been insufficient to meet local needs, and because it has been difficult to recruit

urban women to work in rural areas. At the intermediate and secondary levels, there are shortages of Saudi women teachers because the output of teachers colleges is insufficient to meet demand, especially for foreign languages and sciences. At the same time, thousands of women graduate from colleges and universities with the wrong specializations for existing needs. Reliance on expatriate teachers who do not understand local cultural traditions may hurt educational quality because of communication problems between teachers and students, or because of the tendency of expatriates to compromise educational quality for the sake of their own work security (Birks and Rimmer 1985).

Teacher shortages result in overcrowded classrooms and high pupil/teacher ratios, reliance on male teachers in girls' schools in some countries, or simply having classes with no teachers.

Quality of Teachers. Generally, the women and men attracted to teacher education programs at the secondary and college levels are not the most talented or motivated. In addition, a large proportion of practicing teachers lack pedagogical preparation. Often women teachers are less qualified than men teachers and are less likely to benefit from the few in-service programs offered.

Special Problems of Women Teachers. Women teachers often have to juggle the double burden of work and domestic responsibilities. This problem accounts for the reported high rate of absenteeism and dropout (in Saudi Arabia and Jordan, for instance) and reduced productivity. For example, Rumaihi (1986), quoting a Saudi government report issued in 1981, indicated that an average of three women per day, both Saudi nationals and contract teachers, left their jobs in primary education. Most women quit to look after their children where child care is unavailable or inadequate.

Little has been done to address this problem, and measures undertaken may be creating new and more serious ones. Before the 1950s, only unmarried women could become teachers in Egypt. The government eventually abolished that policy and issued maternity benefits. In Jordan, because of

the high absenteeism of married teachers for maternity leave and other family reasons and the difficulty of finding substitutes, especially in remote areas, in 1965 the Ministry of Education prohibited the hiring of married women teachers. It also pressured married women teachers to resign (Al-Tall 1979). This measure created more serious teacher shortages, and the regulation was canceled in 1967. Solving a serious problem by discriminatory measures will worsen the teacher shortage, violate the human rights of married teachers and discourage girls from enrolling in teacher education programs.

The actual extent of absenteeism and dropping out among women teachers is not known. Most countries provide maternity leave and other benefits for childbirth and childrearing. Egypt, for instance, allows a working mother up to six years of leave, with no more than two years at one time, for child-care while maintaining her seniority and other benefits. The Saudi government gives women teachers a six-week maternity leave that may be combined with a six-month sick leave upon the recommendation of a physician. It also permits women teachers to resign for marriage or child-rearing without having to give six-months' advance notice, as required of all other employees. This policy encourages wastage of female teachers, may make resignation an easy options and aggravates the problems and continuing reliance on foreign women teachers. Several Saudi writers suggest more equitable solutions such as part-time teaching, shared time and expansion of on-site child care. Some women advocate a longer maternity leave similar to that in effect in Egypt (El-Sanabary 1987).

It is not known what proportion of women teachers in Egypt take advantage of the maternity leave benefits and what provisions the Egyptian government makes for substitute teachers. In Saudi Arabia, where female teacher absenteeism and drop-out are common in teacher education programs and among active teachers, no satisfactory solutions have been found.

Teacher/Student Interaction. Recent studies conducted in Western nations have highlighted the importance of teacher-student interaction on motivation, achievement and persistence. Teachers often perpetuate sex-role

stereotypes directly and indirectly through what they teach, their behavior, their interactions with pupils and their assumptions about the different skills and abilities of girls and boys (Whyte 1986).

Women teachers may inspire female students to high achievement and accomplishment or direct them toward conformity with prevailing domestic ideals. Whereas strong and academically talented women teachers provide role models for their students, teachers who are dissatisfied with their professional status and work conditions, or who are having difficulty juggling professional and domestic responsibilities, often project negative images that could damage students' perceptions of themselves and their prospects.

Therefore, it is not enough to have academically and pedagogically qualified women teachers. It is also important to educate them about sex-role stereotypes and their potential effects. Women teachers, if adequately trained, can identify girls "at risk" of dropping out and provide special care and encouragement needed to keep them in school (further suggestions in this regard are discussed in the final section of the paper).

Women Administrators

Women administrators play a key role in girls' schools in all Middle Eastern countries except in Tunisia,[10/] where they are very few. They can help improve the quality of girls' education through more efficient management and leadership and support to female teachers and students. Although there is no literature on school administrators of either gender in these countries, the following general observations are still relevant.

Female school administrators share similar problems to their male and female colleagues. As with men, they receive very little, if any pre-service training, they are often overworked and underpaid and lack adequate resources. As with women teachers, they are less qualified academically than their male colleagues, as illustrated by the statistics from Jordan in Table 9. The data show that women principals in the mid-1970s were

more likely than men to be graduates of secondary schools or teacher training institutes and less likely to have had a college degree. These differences reflect the different qualifications in the teaching pool from which they were recruited. As with teachers, women principals are less likely to participate in in-service programs than are their male counterparts, who are more likely to learn of these programs and take advantage of them because of men's networks and greater access to resources.

Women school administrators are often unprepared to deal with the unique problems of female students and teachers such as absenteeism, drop-out and lack of motivation. However, they could, with proper training and support, play an important role in solving these problems, reducing attrition and improving educational quality. By contrast, women administrators who espouse dominant sex-role stereotypes help perpetuate them by reacting negatively to students' problems. They should be sensitized through printed materials and in-service training or by women knowledgeable about these issues, and not by men, who often have their own inhibitions and misconceptions about women's education and their role in society.

Table 9: Qualifications of Principals in the Public Schools of Jordan, 1976-77

Qualifications	Male Principal	Female Principal	Total	% of Total No. of Principals
Prepatory and Less	2	29	31	1.30
Secondary Certificate	44	75	119	4.90
Matric or G.S.E.C.	105	551	656	27.80
Secondary Vocational	7	4	11	0.45
Higher Vocational	7	2	9	0.45
T.T. Institutes	473	385	858	35.30
Undergraduates	53	35	88	35.30
1st Univ. Degree	400	141	581	22.30
1st Univ. Degree and Diploma	74	18	92	3.80
M. A.	16	7	23	0.95
Ph. D.	2	0	2	0.08
Total:	1,183	1,247	2,430	

Source: Al-Tall (1979, p. 200).

Other Professional and Support Staff

No data exist on non-instructional professional and support staff in Middle Eastern schools. Social workers, guidance counselors, school nurses and librarians are found in limited number in some countries but not at all in most. They are important to the proper functioning of schools, especially in depressed rural areas and urban slums. For instance, a school nurse or social worker can for instance, play a vital role in monitoring the health conditions of children, implementing immunization programs and identifying children with social and emotional problems.

Some school districts in the main Saudi Arabian cities have instituted successful immunization and health education programs in girls' schools and provide health education to mothers. They are helping improve the health conditions and environment of children from poor families and are contributing to their persistence in school. Such programs are sorely needed in the poor countries where the health and nutritional problems of children often interfere with their physical and intellectual growth, as well as their school performance.

V. CONCLUSIONS AND RECOMMENDATIONS

The preceding sections highlighted the progress and ongoing problems of female education in seven representative Middle Eastern and North African countries. They focused on three sets of highly inter-related determinants of female educational access, achievement and outcome: macro-level societal determinants; school characteristics; and family background attributes. Because of the limitations of available research, it is difficult to weigh the relative significance of the various determinants or their scientific validity. Nevertheless, the analysis does outline the issues related to female education and their socio-economic context.

This section discusses briefly the analytical framework, then outlines some of the measures undertaken by governments, NGOS and a few international organizations on behalf of female education, and, finally, offers some policy recommendations and measures to enhance educational equity for females.

An Analytical Model

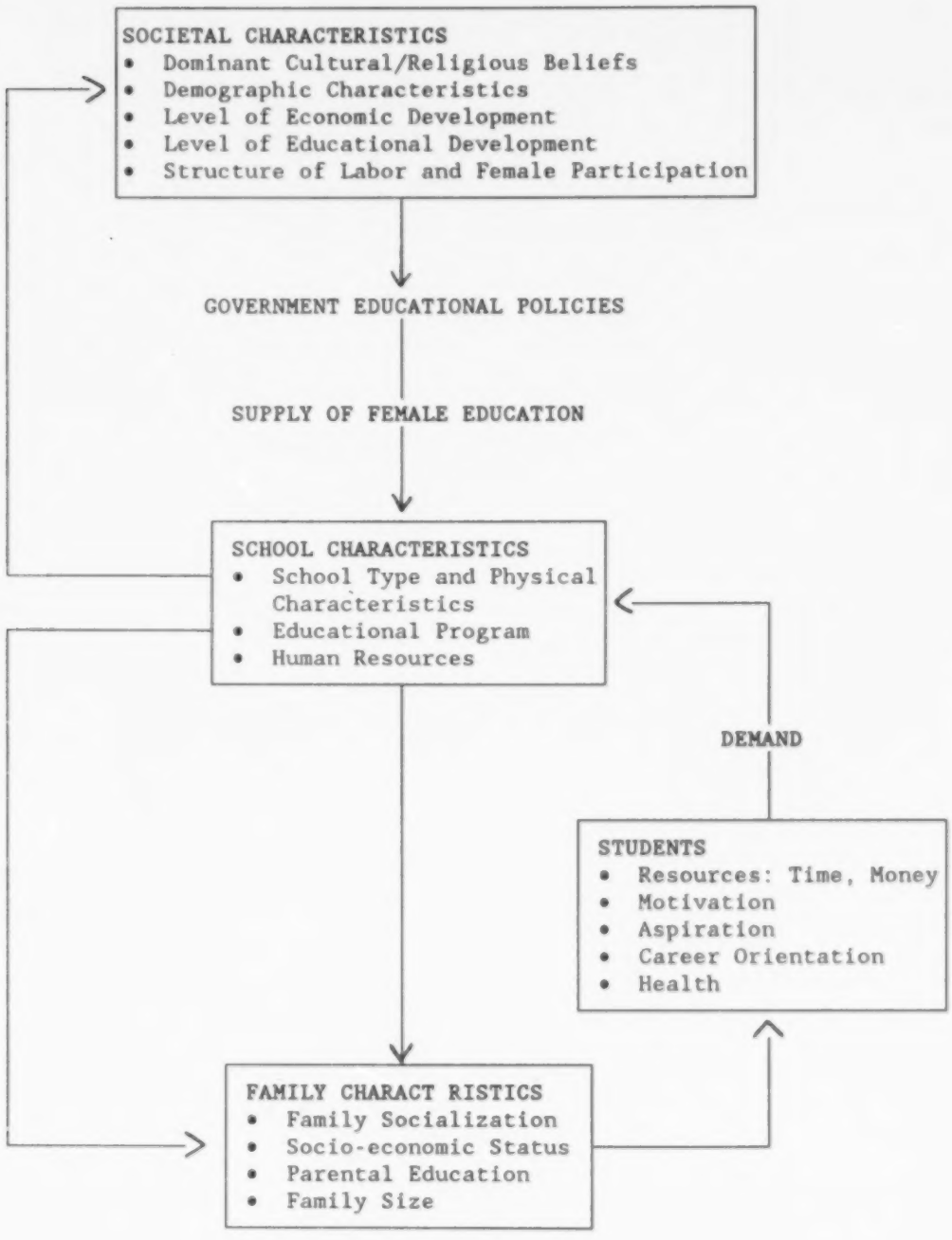
To summarize the inter-relationships and reciprocity among the various determinants of female education, an analytical model is provided (Figure 2). It may be used to investigate the determinants of female education generally. It reveals, for instance, that macro-level societal characteristics help shape educational policies and expenditures and, in turn the supply of facilities and resources. As new educational output -- school graduates or dropouts -- enter the mainstream of society, they change its educational and cultural level, demographics and work force characteristics. By way of a specific example, female education often leads to a re-education in fertility and should ultimately change a country's demographic composition and reduce population pressures on education. Likewise, family socio-economic background and characteristics, which influence female educational chances and attainment, tend to change as more educated women get married and have their own families. They help increase the educational and living standards of their families and society at large and positively affect the education of future generations. Thus, this model is useful as an analytical as well as a policy-making tool and should be useful to researchers and policy-makers interested in identifying points of intervention to achieve the desired level of gender equity in education.

Measures Undertaken on Behalf of Girls' Education

The Role of Governments

Most Middle Eastern governments recognize their enormous educational problems, including gender disparities, but face tough decisions because of

Figure 2: Determinants of the Supply and Demand for Female Education



inadequate resources. Most have undertaken educational reforms, although none specifically geared to women; thus, progress in female education has been a by-product of educational expansion generally. Overall educational policies have had mixed effects on female education. The reforms, of which females have been the unintended beneficiaries, have included: extension of educational facilities in rural areas, albeit slowly; the diversification of school curricula and increased access to technical and vocational education (more so in some countries than others); school reorganization, including the introduction of some comprehensive high schools that teach marketable skills; better teaching methods and attempts to increase the curriculum relevance, upgrading of the level of primary school teacher training from the secondary to the junior college level; and some in-service education for teachers. Poor countries have received substantial external assistance for these reforms. Ironically, poor and rich countries alike continue to pursue western models of educational reform unsuited to local needs and circumstances, sometimes with disastrous results. For example, the adoption of automatic promotion policies has led to the deterioration of educational quality, and the extension of compulsory education to eight years before achieving universal access to the six-year cycle has meant more education for some and less or none, mostly females.

NGO Women's Organizations

These organizations have championed the cause of women's education since the early decades of the 20th century. The Egyptian Feminist Union, established in 1923, advocated female education to raise the cultural level of the population. Numerous women's social welfare and feminist organizations have sponsored educational and training projects for girls and women in Egypt and other Middle East and North African countries. Most have offered classes in literacy and income-generating skills and provided child care for children of working mothers and health education and even housing for single mothers and their children. Some have organized conferences for more elite urban women. At the regional level, the General Arab Women's Federation, founded in 1944, holds an annual conference in one of the member states, where

academicians and activists discuss women's education, employment, social status and related matters. Some of these organizations operate under government auspices while others are private and voluntary. Their resources are limited, however, and they target either the destitute or the very wealthy.

In the late 19th and early 20th centuries, Christian missionaries introduced western-type girls' schools into the Middle Eastern and North African countries and paved the way for private and public female education. Their missionary zeal, however, created resistance among Muslim parents, who associated modern education for girls with western cultural influences. Nonetheless, they contributed to the early development of female education in many Middle Eastern and North African countries.

International Agencies' Educational Programs for Women

International and multinational organizations have helped focus attention on women's education and role in development. Many of these organizations operate in the region, including UNESCO, United Nations Development Program (UNDP), UNRWA, World Health Organization (WHO) and UNICEF.

UNESCO has been the most active in promoting and supporting female education in the region through documentation, research and conferences. Its data bases and documentation are invaluable research sources. The conferences it sponsors on education in the region generally and on women's education in particular have focused attention on the issue of gender inequity in education and have put forward valuable recommendations for improvement. Sadly, many of these suggestions are unknown except to those who issue them.

For several decades, UNRWA has opened and run schools for male and female Palestinian refugees in that region. WHO has also contributed through its health and population projects and the establishment of nursing institutes in various Middle Eastern countries. The UNDP has provided consultation and various kinds of vocational and technical training for girls and women and

management training for female headmistresses and directors, in cooperation either with educational ministries or other national organizations. It has, for example, trained Jordanian women in non-traditional areas such as air traffic control, flight safety, communications operations, hotel management and catering. It has also helped set up several regional centers that employ women experts to respond to the training needs of women, such as the Industrial Development Center for the Arab States (IDCAS) in Cairo and the Arab Institute for Development Planning in Kuwait.

USAID has supported a number of educational and development assistance projects in several countries. Some have focused on the need of women for income-generating skills and access to basic primary education. In addition, several American and European foundations have offices in the region that address the issue of women and development, including education and training.

Unfortunately, coordination among the organizations is often lacking. Consequently, there is much duplication and wasted resources.

Policy Recommendations and Implications

On the basis of the preceding analysis, some policy measures to enhance female educational equity can be suggested.

Given the centralization of the educational systems of the seven countries, the role of the government is crucial in enhancing females' access to education, in expanding their educational choices and in improving the outcome of their education. However, no major progress is possible without a firm commitment to educational equity. There must be a clear-cut policy as to the aims and objectives of female education and an understanding of its potential effects on socio-economic development. Such policies must be supported by adequate financial and human resources and monitoring to guarantee that they achieve their objectives. Hesitancy and inhibitions will

obstruct the avenues to development. These policy measures should target schools, family and community.

Implications for Educational Policy

Absolute gender equity does not appear to be a goal of the seven countries at this time. A certain level of sex-role differentiation will continue. It is up to policy-makers to decide on the level of gender equity and differentiation. Furthermore, they must set clear objectives and lay out an agenda for action to avoid confusion and wasted time and energy.

It is essential, as a first step, to identify where there is consensus on educational and occupational goals for girls and women in each society and region. All governments concede that a minimum basic level of education is a human right that must be guaranteed. Beyond that consensus, there will probably be differences regarding the goals and objectives of women's education.

Educational ministries may find it useful to set up national and regional organizational structures to: assess the impact of their educational and employment policies on girls and women at the national, regional and village levels; identify the structural constraints on female educational access and retention and propose remedial strategies to redress them and monitor progress; help delineate clearly defined policies for educational equity; and devise strategies for their implementation. Women teachers, administrators and parents should be involved in all reforms of female education. Governments and parents may need assurances that these measures will not undermine traditional cultural values, family welfare or social cohesion.

The issues must be identified and prioritized based on local needs and circumstances. Some are common to all countries; others are specific. Still, regional cooperation may prove very effective. Poor countries will

need external financial assistance, while the rich ones may need consultation in identifying problems and mapping out solutions and strategies.

The top priority for all countries should be universal access to basic primary education and its revitalization, particularly in Egypt and Morocco. Efforts must be intensified to enroll all females of primary school age and to reduce attrition and wastage. Universal primary enrollment will be the best, if not the only, means of raising literacy and cultural levels. The very positive effects of maternal education on children should be brought to the attention of national governments in support of this measure. While primary education per se may not have much to do with the manpower needs of these countries, it can help provide income-generating skills and raise the economic standards of women and their families. Resources may have to be redirected from higher education into mass basic education. It is particularly important not only to continue the policy of "free" education, but also to provide added support and incentives to families to encourage them to enroll their daughters and keep them in school until they acquire minimum basic skills. A competency examination may have to be given to children before they are allowed to withdraw from school without penalty.

Improved access to technical and vocational education proper, and enhanced occupational prospects for home economics graduates, should help reduce the pressure on academic secondary and higher education. It is also necessary to boost female representation in the technical, scientific and professional fields at the tertiary level. Sex-role stereotypes may be difficult to eliminate, but much progress is possible in those areas considered appropriate for Muslim women, especially in the more conservative countries. The question of which these areas are remains to be resolved, with a new vision of the realities of modern society and women's multiple roles in it.

Educational Reform Measures

Measures to improve women's educational equity must target school inputs because of their proven impact on educational access, achievement, continuation and outcome (Fuller 1987; Simmons and Alexander 1978). Special consideration must be given to school location, provision of boarding facilities and adequate production and proper utilization of school textbooks. Of special importance is the provision of educational and counseling services to identify female students with special needs and to intervene to help them.

The human resources of schools are key factors in female education. A rejuvenation of pre-service and in-service teacher education programs should raise their consciousness about the special needs of female students and ways to help them. Women principals need management training to enhance their leadership skills and improve the management of schools. The problems faced by married women teachers and other personnel should be identified and solved. Experimentation with various kinds of child care provisions should ease the burden on these women, as would a good system of teacher substitutes for those on extended leave of absence.

Targeting Student Background Issues

Reform measures should target the issues related to the family background of students. Where poor health and malnutrition are problems, school health and nutrition programs would help improve female access, persistence and achievement. In areas of extreme poverty, schools may need to provide low-cost uniforms and shoes. The issue of domestic labor, which interferes with female education in some areas, needs imaginative solutions. Proposals to introduce pre-school education, or "low-cost" child care for siblings, are costly and impractical in poor nations. Other innovative and inexpensive measures must be found. Despite the drawbacks, the use of double shifts may help by permitting rotation of child care responsibilities. A year-round school year with different age children attending at different times may also help. Providing work opportunities for groups of mothers

somewhere where one of them can provide child care at a fee is another alternative. Distance education using radio and television may be very effective in reaching nomads and people living in remote areas.

Where there is opposition to a certain type of education, such as nursing or vocational education, information campaigns can be used through parent or community group meetings or radio and television, whose educational potential has not yet been fully utilized.

In sum, action and research are needed in the various areas of concern discussed in this paper in order to reduce gender disparities and improve the educational attainment of Middle Eastern and North African women. The resulting benefits will accrue to women, their families and society in general.

Table A1: Egypt--Percent Distribution of the Population by Level of Attained Education, 1976

Gender and Age		Total Number	Percent Distribution by Level of Attained Education[a]					
			All Levels	NE+P1	P2	S1	S2	T1	T2
Male and Female		21,544,042	100.0	78.3	5.2	8.1	7.3	0.4	2.6
Male	15+	10,889,607	100.0	70.5	7.0	8.0	9.9	0.5	4.0
	15-19	2,097,165	100.0	49.0	18.0	27.2	5.7	0.0	0.0
	20-24	1,480,052	100.0	56.0	3.9	9.3	27.2	0.7	2.8
	25-29	1,297,617	100.0	66.9	4.0	4.6	15.0	1.4	8.1
	30-34	1,018,530	100.0	71.0	4.6	4.0	10.8	1.0	8.5
	35-39	1,012,890	100.0	77.2	4.3	3.3	7.7	0.7	6.7
	40-44	922,242	100.0	82.3	5.0	1.5	5.8	0.5	5.0
	45-49	781,557	100.0	85.2	5.6	0.8	4.1	0.3	3.9
	50-54	709,694	100.0	86.8	5.6	0.6	3.7	0.2	3.2
	55-59	475,646	100.0	85.9	5.9	0.5	4.3	0.2	3.1
	60-64	472,520	100.0	90.3	3.3	0.4	3.6	0.2	2.3
	65+	621,694	100.0	92.1	2.3	0.4	3.2	0.2	1.8
Female	15+	10,854,435	100.0	86.3	3.2	4.2	4.7	0.3	1.2
	15-19	1,804,753	100.0	67.9	10.7	16.9	4.5	0.0	0.0
	20-24	1,523,332	100.0	76.2	2.7	4.4	14.1	0.6	2.0
	25-29	1,336,927	100.0	85.0	2.1	2.3	6.4	0.8	3.4
	30-34	1,070,161	100.0	89.0	1.9	2.0	4.3	0.6	2.3
	35-39	1,013,307	100.0	92.9	1.5	1.2	2.8	0.3	1.2
	40-44	928,896	100.0	94.9	1.6	0.5	2.1	0.2	0.7
	45-49	726,463	100.0	96.2	1.5	0.3	1.4	0.1	0.4
	50-54	726,362	100.0	97.2	1.2	0.2	1.0	0.0	0.2
	55-59	402,868	100.0	97.1	1.3	0.3	1.1	0.1	0.2
	60-64	477,019	100.0	98.3	0.8	0.2	0.7	0.0	0.1
	65+	644,347	100.0	98.6	0.6	0.2	0.5	0.0	0.1

Note: Classification Codes: Age - 11, Education - 61.

[a] NE+P1 - Illiterate or read and write
P2 - Primary Certificate
S1 - Certificate below Intermediate
S2 - Intermediate Certificate
T1 - Diploma below University Degree
T2 - University First Degree, Post-Graduate Diploma, Masters Degree or Doctorate

Source: Kaneko (1987).

Table A2: Jordan--Percent Distribution of the Population by Level of Attained Education, 1979

Gender and Age		Total Number	Percent Distribution by Level of Attained Education[a]					
			All Levels	NE	P	S1	S2	T1	T2
Male and Female		971,375	100.0	46.0	19.8	17.6	8.9	2.9	2.9
Male	15+	488,969	100.0	37.0	23.1	20.7	11.0	3.3	4.8
	15-19	116,248	100.0	8.1	31.2	52.1	8.2	0.4	0.0
	20-24	70,560	100.0	15.2	27.3	19.4	25.7	9.1	3.3
	25-29	49,094	100.0	20.1	26.3	16.6	17.3	8.0	11.8
	30-34	45,224	100.0	28.9	26.8	12.6	13.2	4.9	13.5
	35-39	46,568	100.0	39.9	24.4	12.7	9.7	3.6	9.8
	40-44	40,824	100.0	58.1	18.4	8.4	7.1	2.1	5.9
	45-49	32,664	100.0	70.3	16.8	4.7	4.4	0.9	2.8
	50-54	26,350	100.0	74.3	14.7	4.0	4.4	0.7	1.9
	55-59	17,963	100.0	78.6	11.7	3.3	4.2	0.5	1.8
	60-64	13,925	100.0	85.1	8.0	2.3	3.1	0.4	1.1
	65+	29,549	100.0	92.5	3.6	1.2	1.7	0.3	0.9
Female	15+	482,406	100.0	59.0	16.6	14.3	6.7	2.5	1.0
	15-19	109,027	100.0	19.8	30.6	41.7	7.7	0.2	0.0
	20-24	71,836	100.0	34.7	22.7	14.8	18.6	7.5	1.7
	25-29	52,638	100.0	50.8	21.0	10.2	8.1	6.7	3.1
	30-34	50,758	100.0	66.4	15.7	6.7	5.2	3.7	2.4
	35-39	45,393	100.0	79.8	9.7	4.1	3.8	1.4	1.1
	40-44	40,639	100.0	88.4	6.0	2.4	2.1	0.5	0.6
	45-49	31,420	100.0	91.2	5.3	1.8	1.2	0.3	0.2
	50-54	23,455	100.0	92.4	4.8	1.4	1.0	0.2	0.1
	55-59	17,071	100.0	94.1	3.6	1.1	0.9	0.3	0.1
	60-64	13,217	100.0	96.5	1.9	0.8	0.5	0.2	0.1
	65+	26,952	100.0	98.0	1.1	0.4	0.3	0.1	0.0

Note: Classification Codes: Age - 11, Education - 41.

[a] Population living in East Bank only.
NE - Without qualification, illiterate or without qualification, literate
P - Primary Certificate
S1 - Certificate below Intermediate
S2 - Intermediate Certificate
T1 - Diploma below University Degree
T2 - University First Degree, Post-Graduate Diploma, Masters Degree or Doctorate

Source: Kaneko (1987).

Table A3: Tunisia--Percent Distribution of the Population by Level of Attained Education, 1975

Gender and Age		Total Number	Percent Distribution by Level of Attained Education[a]					
			All Levels	NE	P	S1	S2	T1	T2
Male and Female		3,194,490	100.0	62.9	23.8	6.8	5.4	0.1	1.0
Male	15+	1,600,780	100.0	50.4	30.7	9.3	7.8	0.1	1.6
	15-19	327,960	100.0	15.0	59.1	19.8	5.9	0.1	0.1
	20-24	249,350	100.0	21.2	39.1	15.0	22.1	0.3	2.3
	25-29	151,360	100.0	37.8	31.1	12.9	13.4	0.4	4.6
	30-34	118,490	100.0	54.2	25.9	7.9	7.7	0.2	4.1
	35-39	137,100	100.0	65.6	22.1	4.7	5.5	0.1	2.0
	40-44	132,760	100.0	73.4	18.2	3.0	3.8	0.1	1.5
	45-49	117,770	100.0	76.3	18.1	2.2	2.4	0.0	1.0
	50-54	92,960	100.0	78.2	16.7	2.1	2.0	0.0	0.9
	55-59	81,080	100.0	82.0	14.3	1.6	1.6	0.0	0.6
	60-64	74,470	100.0	84.4	12.5	1.3	1.3	0.0	0.6
	65+	117,480	100.0	88.5	9.3	1.0	0.9	0.0	0.3
Female	15+	1,593,710	100.0	75.5	16.8	4.2	3.0	0.0	0.5
	15-19	311,810	100.0	41.1	45.2	10.5	3.2	0.0	0.0
	20-24	251,510	100.0	55.9	27.2	6.9	9.1	0.1	0.9
	25-29	173,540	100.0	70.9	17.2	5.8	4.5	0.1	1.6
	30-34	133,750	100.0	84.5	9.2	3.1	2.3	0.1	0.9
	35-39	148,920	100.0	93.3	4.2	1.1	1.0	0.0	0.4
	40-44	138,090	100.0	96.4	2.5	0.5	0.5	0.0	0.2
	45-49	116,006	100.0	97.2	2.0	0.3	0.4	0.0	0.1
	50-54	90,540	100.0	97.7	1.5	0.3	0.4	0.0	0.1
	55-59	69,550	100.0	97.7	1.6	0.3	0.3	0.0	0.1
	60-64	59,650	100.0	97.9	1.4	0.3	0.3	0.0	0.2
	65+	100,350	100.0	98.0	1.4	0.3	0.3	0.0	0.1

Note: Classification Codes: Age - 11, Education - 41.

[a] Population living in East Bank Only.
NE - Noant
P - Koutab or Primaire
S1 - Soc., Prof. or Sec., 1 Cycle
S2 - Soc., 2 Cycle
T1 - Ecole Spec.
T2 - Superieur

Source: Kaneko (1987).

Table A4: Turkey--Percent Distribution of the Population by Level of Attained Education, 1980

Gender and Age		Total Number	Percent Distribution by Level of Attained Education[a]				
			All Levels	NE+P1	P2	S1	S2	T
Male and Female		27,119,540	100.0	40.7	42.1	7.2	7.0	3.0
Male	15+	13,615,248	100.0	26.4	50.4	9.8	8.9	4.5
	15-19	2,561,968	100.0	8.9	57.1	25.1	8.8	0.1
	20-24	2,072,040	100.0	8.3	57.6	10.3	18.9	4.9
	25-29	1,717,742	100.0	10.4	59.7	9.0	12.3	8.6
	30-34	1,372,319	100.0	15.4	59.8	7.4	9.0	8.3
	35-39	1,077,798	100.0	25.0	54.7	6.1	7.2	7.0
	40-44	987,895	100.0	33.9	52.5	3.6	5.3	4.8
	45-49	1,042,686	100.0	43.7	45.9	3.2	3.9	3.3
	50-54	861,464	100.0	50.4	38.0	3.6	4.2	3.8
	55-59	591,722	100.0	55.9	32.3	4.1	3.6	4.1
	60-64	374,974	100.0	65.4	25.1	3.1	2.8	3.6
	65+	954,640	100.0	77.2	16.0	2.6	2.0	2.2
Female	15+	13,504,292	100.0	55.0	33.8	4.6	5.0	1.5
	15-19	2,403,777	100.0	24.5	55.3	13.8	6.3	0.1
	20-24	1,974,996	100.0	32.3	49.6	4.5	10.5	3.1
	25-29	1,655,375	100.0	42.9	43.4	3.7	7.2	2.9
	30-34	1,320,503	100.0	54.3	35.2	2.9	5.2	2.4
	35-39	1,118,657	100.0	63.9	28.6	2.1	3.7	1.7
	40-44	1,067,600	100.0	70.8	24.1	1.6	2.4	1.1
	45-49	963,867	100.0	76.1	19.5	1.5	2.0	0.9
	50-54	866,754	100.0	79.8	15.2	2.0	2.0	1.0
	55-59	558,232	100.0	81.4	13.6	2.1	2.0	1.0
	60-64	417,158	100.0	86.6	9.6	1.6	1.4	0.9
	65+	1,157,373	100.0	92.4	5.1	1.1	0.8	0.6

Note: Classification Codes: Age - 11, Education - 62.

[a] NE+P1 - Illiterate or literate with diploma
P2 - Graduates, primary school
S1 - Graduates, junior high school or graduates, vocational schools at junior high level
S2 - Graduates, high school or graduates, vocational schools at senior high level
T - Graduates, higher education and faculties.

Source: Kaneko (1987).

Table A4: Turkey--Percent Distribution of the Population by Level of Attained Education, 1980

Gender and Age		Total Number	Percent Distribution by Level of Attained Education*				
			All Levels	NE+P1	P2	S1	S2	T
Male and Female		27,119,540	100.0	40.7	42.1	7.2	7.0	3.0
Male	15+	13,615,248	100.0	26.4	50.4	9.8	8.9	4.5
	15-19	2,561,968	100.0	8.9	57.1	25.1	8.8	0.1
	20-24	2,072,040	100.0	8.3	57.6	10.3	18.9	4.9
	25-29	1,717,742	100.0	10.4	59.7	9.0	12.3	8.6
	30-34	1,372,319	100.0	15.4	59.8	7.4	9.0	8.3
	35-39	1,077,798	100.0	25.0	54.7	6.1	7.2	7.0
	40-44	987,895	100.0	33.9	52.5	3.6	5.3	4.8
	45-49	1,042,686	100.0	43.7	45.9	3.2	3.9	3.3
	50-54	861,464	100.0	50.4	38.0	3.6	4.2	3.8
	55-59	591,722	100.0	55.9	32.3	4.1	3.6	4.1
	60-64	374,974	100.0	65.4	25.1	3.1	2.8	3.6
	65+	954,640	100.0	77.2	16.0	2.6	2.0	2.2
Female	15+	13,504,292	100.0	55.0	33.8	4.6	5.0	1.5
	15-19	2,403,777	100.0	24.5	55.3	13.8	6.3	0.1
	20-24	1,974,996	100.0	32.3	49.6	4.5	10.5	3.1
	25-29	1,655,375	100.0	42.9	43.4	3.7	7.2	2.9
	30-34	1,320,503	100.0	54.3	35.2	2.9	5.2	2.4
	35-39	1,118,657	100.0	63.9	28.6	2.1	3.7	1.7
	40-44	1,067,600	100.0	70.8	24.1	1.6	2.4	1.1
	45-49	963,867	100.0	76.1	19.5	1.5	2.0	0.9
	50-54	866,754	100.0	79.8	15.2	2.0	2.0	1.0
	55-59	558,232	100.0	81.4	13.6	2.1	2.0	1.0
	60-64	417,158	100.0	86.6	9.6	1.6	1.4	0.9
	65+	1,157,373	100.0	92.4	5.1	1.1	0.8	0.6

Note: Classification Codes: Age - 11, Education - 62.

* NE+P1 - Illiterate or literate with diploma
P2 - Graduates, primary school
S1 - Graduates, junior high school or graduates, vocational schools at junior high level
S2 - Graduates, high school or graduates, vocational schools at senior high level
T - Graduates, higher education and faculties.

Source: Kaneko (1987).

Table A5: Turkey--Students Enrolled ---in Vocational and Technical Schools by Sex and Type of School, 1974-75, 1979-80 and 1981-82

Type of School	1974-75				1979-80				1981-82			
	No. of Students		F (%)	M	No. of Students		F (%)	M	No. of Students		F (%)	M
Men's Technical Training	77	823	0.0	100.0	121	690	0.0	100.0	116	968	0.0	100.0
Domestic Science	45	728	100.0	0.0	61	433	100.0	0.0	61	402	100.0	0.0
Teacher Training High Schools	58	738	47.6	52.4	17	809	31.8	68.2	15	776	32.2	67.8
Schools of Commerce and Tourism	63	166	27.8	72.2	108	797	34.7	65.3	95	480	39.1	60.9
Health and Nursing Schools	13	206	90.5	9.5	20	173	92.0	8.0	18	895	94.2	5.8
Agriculture Schools	3	599	7.1	92.9	4	874	5.6	94.4	3	049	10.2	89.8
Moslem Teacher Training Schools	48	900	0.5	99.5	178	013	9.3	90.7	216	864	13.4	86.6
Other Vocational High Schools		806	3.6	96.4	1	219	10.7	89.3	1	328	9.6	90.4

Source: Statistical Yearbook of Turkey 1983, Tables 92-98 as presented in OECD, (1986, p. 171)

END NOTES

1. The net enrollment ratios are actually lower than those given in Table 3; the gross enrollment ratios exceeding 100 are the result of the enrollment of over-age students.

2. Numerous writers have exaggerated the "inferior position," while others have noted improvements in the personal and social arenas, as well as variations across countries, regions and classes.

3. The rural-urban disparities were noted by Szyliowicz (1973) for Turkey, El-Sanabary (1973) for Libya, Algeria and Syria, Youssef (1976) for Morocco, and Massailas and Jarrar (1983) for the Arab countries in general.

4. For an overview of the employment of Arab women, see Azzam, Abu Nasr and Lorfing (1985, Chapter 1).

5. Cochrane, Mehra and Osheba (1986) noted that in the Egyptian educational system, higher education claimed 17% of educational enrollment as compared to an average of 3.7% for developing countries. The relatively high position of Middle Eastern women in higher education was noted also by Youssef (1974, 1978b), El-Sanabary (1973), and Meleis, El-Sanabary and Beeson (1979).

6. Sixty-five percent of the women engineers under the age of 35 came from the urban bourgeoisie and aristocracy -- the top 11% of the Egyptian population -- as compared with 41% of their male cohorts (Moore 1980, 132).

7. This survey provided much of the data for the published research on parental effects on female education in Egypt.

8. These research findings come from Allman (1979) and Jones (1980) for Tunisia; Maher (1974, 1978) for Morocco; and Basson (1982) for Jordan.

9. This study was conducted for UNESCO by researchers from the Institute of Women's Studies in Arab Countries, located in Lebanon. The researchers analyzed a sample of 79 Arabic readers, 52 of which were from Lebanon and the rest from Egypt, Tunisia, Kuwait, Saudi Arabia, Qatar and the People's Democratic Republic of Yemen. All the textbooks reviewed were primary-level except the Lebanese ones, which included intermediate-level books.

10. A UNESCO report indicated that in 1974/75, only 12 out of 150 secondary school principals in Tunisia were female. This statistics revealed the limited access of women to leadership positions in co-educational schools.

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